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# A Global Reference Atmosphere From 18 to 80 km

GERALD VANN GROVES

31 May 1985

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ATMOSPHERIC SCIENCES DIVISION          PROJECT 6670
## AIR FORCE GEOPHYSICS LABORATORY
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This technical report has been reviewed and is approved for publication.


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Monthly means of zonal mean temperature, pressure, density, number density, pressure scale height, and geostrophic W-E wind are tabulated at heights from 18 to 80 km and latitudes from 80°S to 80°N with a 10° latitude interval. Formulae by which these quantities may be computed are present. Monthly mean longitudinal variations of temperature, pressure and density are tabulated at 30° longitude intervals for September to April in the N hemisphere and April to November in the S hemisphere at latitudes 20°, 30°, ..., 80°N (or S) over the same range of heights. Formulae by which the temperature, pressure and density variations may be computed are presented. The zonal means are derived from tabulations of temperature and geopotential height based on Nimbus 5 SCR and Nimbus 6 PMR and a S hemisphere reference atmosphere based on rocketsonde data that were both prepared for the COSPAR Meeting, Graz 1984 and on two earlier N hemisphere rocket-based reference atmospheres, CIRA 1972 and Air Force Reference Atmospheres (1978). The

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longitudinal variations are derived solely from the satellite-based tabulations.
Comparisons are made between the rocket-based reference atmospheres,
the satellite-based tabulations and the reference values presented here.

## Preface

The author gratefully acknowledges valuable discussions with Dr. K. S. W.
Champion during the course of this work and the award of a National Research
Council Research Associateship during the tenure of which the work was carried
out in the Atmospheric Sciences Division, Air Force Geophysics Laboratory,
Hanscom AFB, Massachusetts, USA.

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# A Global Reference Atmosphere From 18 to 80 km

## 1. INTRODUCTION

The work presented in this report has been motivated in part by the preparation of tables of temperature and geopotential height, based on Nimbus 5 SCR and Nimbus 6 PMR, for the COSPAR Meeting, Graz 1984 by J. J. Barnett, the Department of Physics, University of Oxford.[1] The tables are of monthly means of (a) zonal mean values and (b) longitudinal wave 1 and 2 amplitudes and phases of temperature and geopotential height at latitude intervals of 10° from 80° S to 80° N at levels where -ln(pressure/surface pressure) = 2.5, 3.0, ..., 12.0. Additional motivation has been provided by the availability of tables of monthly mean temperature (also pressure and density) compiled for heights 20 to 80 km and latitudes 0° to 70° S from southern hemisphere rocketsonde data by Koshelkov.[2,3,4]

Other reference atmospheres that are available in terms of geometric height with monthly time resolution are Air Force Reference Atmospheres[5] and CIRA 1972,[6] both of which are for northern latitudes only and are based on rocket data from sites that are located mostly on the North American continent or surrounding ocean areas. The recent tabulations mentioned above therefore offer the prospect of developing a reference atmosphere in terms of geometric height which has global coverage.

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The objective of the present work has been to intercompare the above tabulations of temperature and associated lower-boundary pressure at their common points; to determine reasonably representative values for these quantities; and to present reference temperatures, pressure and densities in a form that is convenient for potential users. Zonal mean values are also tabulated below for the following atmospheric parameters: number density, pressure scale height and geostrophic W-E wind.

## 2. INTERCOMPARISON OF TEMPERATURES

The differences were studied between the S hemisphere temperatures of Koshelkov and the satellite zonal mean values at heights 20, 25, ..., 80 km and latitudes 0°, 10°, ..., 70° S for each month. The averages of these differences were taken over 12 months at 10°, 20° and 30° S but at higher latitudes an unknown longitudinal dependence is likely to be present in the rocket values during a period spanning the winter months and therefore at 40° S averages were taken over 9 months (October to June) and at 50°, 60° and 70° S over 6 months (December to May). The average differences obtained are shown at 10°, 30°, 50° and 70° S in Figure 1.

Similar analyses were carried out for the N hemisphere temperatures of CIRA 1972 and Air Force Reference Atmospheres from 0° to 70° N, the averages at 40° N being taken over 9 months, February to October, and at 50°, 60° and 70° N over 6 months, April to September. The results obtained at 10°, 30°, 50° and 70° N are plotted in Figure 1 from which it is seen that:

(a) Average differences between rocket and satellite values are small amounting to a few K at most heights.

(b) Average differences are consistent for each of the three rocket reference atmospheres. Consistency between CIRA 1972 and Air Force Reference Atmospheres is not surprising as they are based on common rocket data, but for the S hemisphere the rocketsonde dataset is an independent one.

(c) Average differences have a similar height profile at all latitudes except near 80 km where they decrease from 10K at low latitudes to 4K at high latitudes.

## 3. THE DERIVATION OF REFERENCE TEMPERATURES

At 20 to 30 km, radiosonde and rocketsonde data combine to provide a temperature accuracy that is smaller than the temperature differences in Figure 1 and therefore a case exists for making adjustments to the satellite values. Also above about 60 km the rocket data are obtained by well-established techniques such as the

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grenade and falling sphere methods and appropriate adjustments to the satellite
determination would appear to be in order. In the 50-km region the CIRA 1972
was prepared from measurements taken close to noon and it was recognized at the
time of its preparation that temperature values were biassed on this account.
Figure 1 confirms that CIRA 1972 temperatures are higher than the other values in
the region of 55 km and consequently CIRA 1972 from 45 to 60 km has not been taken
into account when determining adjustments to the satellite values.
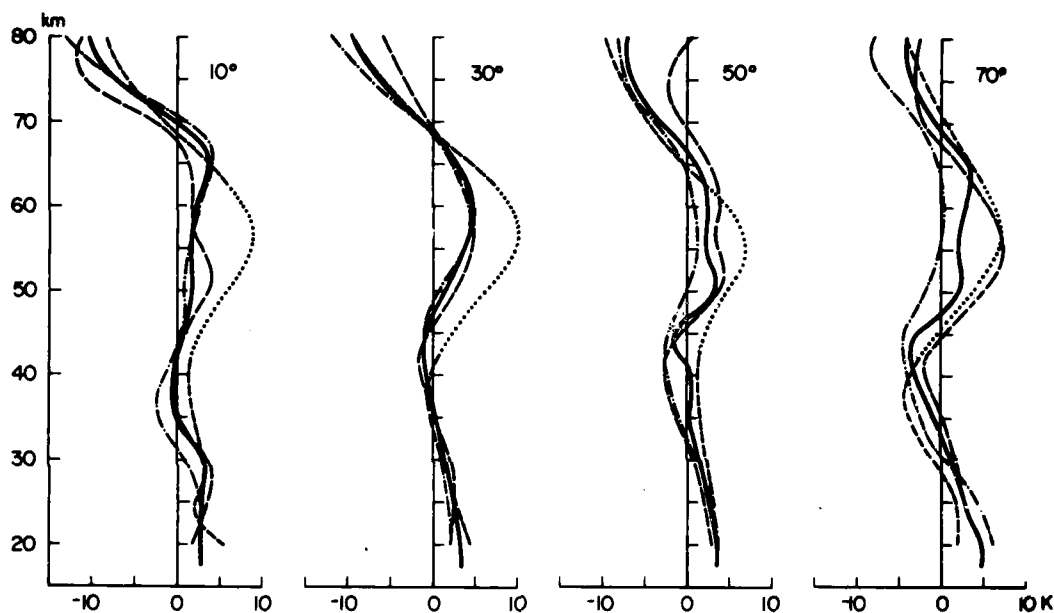


Figure 1. Comparisons of Rocket-Based and Satellite-Based Temperatures. [1]
Averaged monthly mean rocket minus satellite temperatures are shown for
the following rocket values: —. —. Koshelkov;[2,3,4] ___ Air Force Reference
Atmospheres;[5] ------- ---- CIRA 1972,[6] where ····· denotes values
omitted in the subsequent analysis. Averages are for 12 months at 10°, 30°
latitude and for December to May in the S hemisphere or April to September
in the N hemisphere at 50°, 70° latitude. Key: ——— adjustments to be
applied to satellite-based temperatures derived by weighted averaging of
the other three curves

The continuous lines in Figure 1 have been obtained by averaging the three
curves with omission of the CIRA 1972 curve between 45 and 60 km. The deviations
of the continuous lines from the vertical axis are taken as adjustments to be applied
to the satellite temperatures. The analysis is applied at 2.5-km intervals from
17.5 to 80 km, the deviations at 17.5 km being taken equal to those at 20 km.

In the same way, adjustments were determined for 0°, 20°, 40° and 60° latitude, while for 80° the 70° adjustments were adopted. Along with each value of adjustment, a value was obtained for its expected standard deviation based on the spread of the three curves in Figure 1.

Having adjusted satellite temperatures by the above procedure to obtain T', pressure scale heights H' were calculated from

$$H' = RT/Mg \qquad (1)$$

with $T = T'$, $R = 8314.32$ JK$^{-1}$(kmol)$^{-1}$, $M = 28.9644$ kg(kmol)$^{-1}$ and[7]

$$g = g_\phi / (1 + z/r_\phi)^2 \qquad (2)$$

where

$$g_\phi = 9.780356 \,(1 + 0.0052885 \sin^2 \phi - 0.0000059 \sin^2 2\phi) \qquad \text{(m s}^{-2})$$

$$r_\phi = 2 \times 10^6 \, g_\phi'/(3.08546 + 0.00227 \cos 2\phi) \qquad \text{(m)}$$

$\phi$ being latitude and $z$ height in meters. Values of $1/H'$ were then smoothed to obtain $1/H_{ref}$ by a polynomial of degree 8 in height whose coefficients were polynomials of degree 8 in sine of latitude, thereby introducing 81 constants. The formula was fitted by the method of weighted least-squares[8] at 17.5, 18.0, ..., 80 km and 80° S, 70° S, ..., 80° N latitude, that is, at 442 points, the weight given to $1/H'$ being derived from the estimated standard deviations of the temperature adjustments. New smoothed values of temperature $T_{ref}$ were then calculated from Eq. (1) with $H = H_{ref}$.

The differences between the original satellite temperatures $T_{sat}$ and $T_{ref}$ are shown in Table 1. These values are actually the average for the 12 months as there is only a small month-to-month variation. The values in Table 1 show that the smoothing process essentially maintains the equatorial symmetry of the changes made to $T_{sat}$. Values of $T_{sat} - T_{ref}$ averaged over 12 months are plotted in Figure 2 (right-hand diagram) at 10°, 30°, 50° and 70° latitude; and the latitude dependence is seen to be small. The corresponding global average is given in Table 1. Differences between each of the three sets of rocket temperatures and $T_{ref}$ averaged over a number of months according to the scheme in Section 2 are shown in Figure 2.

7. List, R. J. (1968) Smithsonian Meteorological Tables, Smithsonian Institute Press, Washington, D. C.

8. Groves, G. V. (1984) Atmospheric Structure Variations, Part II, Polynomial representation of Middle Atmosphere Structure, Scientific Report No. 1, 1 January - 31 December 1984, AFOSR-84-0045, Department of Physics and Astronomy, University College London, Gower Street, London WC1 6 BT, England, 24 October 1984.

Table 1. Satellite Temperatures Minus New Temperature Model (K) (Average of 12 monthly values and their global average)

| LAT = KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | GLOBAL AV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17.5 | -5.4 | -5.2 | -3.8 | -3.4 | -3.2 | -3.6 | -3.2 | -2.8 | -2.2 | -2.8 | -3.1 | -3.7 | -3.3 | -3.3 | -3.9 | -5.0 | -5.3 | -3.3 |
| 20.0 | -3.2 | -3.3 | -3.1 | -3.4 | -3.4 | -3.6 | -3.9 | -3.2 | -3.3 | -3.2 | -3.9 | -3.7 | -3.3 | -3.1 | -3.4 | -3.8 | -3.7 | -3.5 |
| 22.5 | -4.4 | -4.6 | -3.8 | -3.0 | -3.2 | -3.2 | -3.3 | -2.4 | -2.5 | -2.5 | -3.2 | -3.1 | -3.2 | -3.0 | -3.9 | -4.0 | -3.9 | -3.2 |
| 25.0 | -3.3 | -3.8 | -3.6 | -2.2 | -2.4 | -2.2 | -2.4 | -1.9 | -2.0 | -2.1 | -2.3 | -2.1 | -2.6 | -2.6 | -3.5 | -3.5 | -3.4 | -2.5 |
| 27.5 | -1.7 | -2.1 | -2.5 | -1.8 | -1.6 | -1.7 | -2.5 | -2.6 | -2.9 | -2.9 | -2.5 | -1.6 | -1.9 | -2.0 | -2.4 | -2.2 | -2.0 | -2.3 |
| 30.0 | -0.5 | -0.6 | -1.6 | -1.7 | -1.3 | -1.4 | -2.2 | -2.5 | -2.8 | -2.6 | -2.2 | -1.5 | -1.5 | -1.6 | -1.5 | -1.0 | -0.3 | -1.8 |
| 32.5 | 0.1 | 0.4 | -0.7 | -1.4 | -0.7 | -0.7 | -1.2 | -1.3 | -1.1 | -1.2 | -1.1 | -0.9 | -0.7 | -1.0 | -0.6 | -0.1 | 0.7 | -0.9 |
| 35.0 | 1.1 | 1.2 | 0.1 | -0.9 | -0.0 | 0.0 | -0.2 | -0.2 | 0.4 | 0.1 | -0.2 | -0.2 | 0.1 | -0.3 | 0.0 | 0.5 | 1.5 | 0.1 |
| 37.5 | 2.0 | 1.7 | 0.5 | -0.3 | 0.5 | 0.6 | 0.3 | 0.2 | 0.9 | 0.6 | 0.3 | 0.2 | 0.6 | 0.1 | 0.3 | 0.9 | 2.1 | 0.5 |
| 40.0 | 2.3 | 1.8 | 0.6 | 0.2 | 1.0 | 1.1 | 0.7 | 0.1 | 0.5 | 0.5 | 0.7 | 0.5 | 0.9 | 0.3 | 0.4 | 1.3 | 2.5 | 0.7 |
| 42.5 | 2.4 | 1.7 | 0.5 | 0.2 | 1.3 | 1.3 | 0.7 | -0.4 | -0.3 | 0.0 | 0.7 | 0.6 | 1.0 | 0.3 | 0.4 | 1.5 | 2.7 | 0.6 |
| 45.0 | 2.2 | 1.5 | 0.4 | -0.3 | 0.9 | 1.0 | 0.5 | -1.0 | -1.1 | -0.6 | 0.5 | 0.5 | 0.8 | -0.1 | 0.2 | 1.4 | 2.5 | 0.3 |
| 47.5 | 1.7 | 1.1 | -0.1 | -1.1 | -0.2 | 0.1 | -0.3 | -1.4 | -1.6 | -1.1 | -0.3 | -0.2 | -0.0 | -0.7 | -0.3 | 0.9 | 1.9 | -0.4 |
| 50.0 | 0.5 | 0.1 | -1.2 | -2.2 | -1.8 | -1.3 | -1.4 | -1.7 | -1.6 | -1.5 | -1.5 | -1.5 | -1.4 | -1.8 | -1.4 | -0.2 | 0.7 | -1.4 |
| 52.5 | -1.2 | -1.4 | -2.6 | -3.3 | -3.5 | -3.1 | -3.0 | -1.9 | -1.1 | -1.8 | -3.0 | -3.2 | -3.1 | -3.0 | -2.8 | -1.8 | -0.7 | -2.6 |
| 55.0 | -2.6 | -2.7 | -3.4 | -3.8 | -4.8 | -4.6 | -4.1 | -2.1 | -0.8 | -2.1 | -4.2 | -4.6 | -4.5 | -4.0 | -3.9 | -3.0 | -2.5 | -3.5 |
| 57.5 | -3.4 | -3.4 | -3.3 | -3.5 | -4.9 | -5.1 | -4.5 | -2.1 | -0.9 | -2.2 | -4.5 | -5.1 | -5.0 | -4.0 | -3.8 | -3.5 | -3.5 | -3.7 |
| 60.0 | -3.7 | -3.6 | -2.6 | -2.5 | -4.0 | -4.4 | -4.1 | -2.1 | -1.2 | -2.3 | -4.1 | -4.4 | -4.2 | -3.1 | -2.9 | -3.4 | -3.8 | -3.3 |
| 62.5 | -3.4 | -3.2 | -1.6 | -1.2 | -2.5 | -3.3 | -3.4 | -2.4 | -1.8 | -2.6 | -3.5 | -3.3 | -2.7 | -1.7 | -1.6 | -2.9 | -3.6 | -2.6 |
| 65.0 | -2.6 | -2.3 | -0.1 | 0.2 | -1.2 | -2.4 | -2.8 | -2.6 | -2.3 | -3.0 | -3.1 | -2.2 | -1.2 | -0.2 | -0.0 | -2.0 | -2.7 | -1.9 |
| 67.5 | -1.1 | -0.8 | 1.5 | 1.6 | -0.0 | -1.5 | -2.2 | -2.3 | -2.3 | -2.8 | -2.5 | -1.2 | 0.2 | 1.4 | 1.5 | -0.7 | -1.2 | -1.0 |
| 70.0 | 0.5 | 0.8 | 3.2 | 3.2 | 1.7 | 0.2 | -0.5 | -0.5 | -0.7 | -1.0 | -0.8 | 0.5 | 1.9 | 3.0 | 3.0 | 0.8 | 0.5 | 0.7 |
| 72.5 | 2.2 | 2.3 | 4.5 | 5.0 | 4.3 | 3.3 | 2.9 | 3.1 | 3.1 | 2.7 | 2.6 | 3.5 | 4.4 | 4.9 | 4.4 | 2.2 | 2.2 | 3.5 |
| 75.0 | 3.7 | 3.5 | 5.4 | 6.8 | 7.4 | 7.0 | 7.9 | 7.5 | 7.9 | 7.3 | 6.8 | 7.1 | 7.1 | 6.7 | 5.5 | 3.6 | 3.6 | 6.7 |
| 77.5 | 4.7 | 4.2 | 5.5 | 7.7 | 9.4 | 9.9 | 9.9 | 10.7 | 11.5 | 10.7 | 9.8 | 10.0 | 9.0 | 7.7 | 5.8 | 4.5 | 4.7 | 9.0 |
| 80.0 | 4.1 | 4.1 | 4.6 | 6.5 | 8.4 | 9.2 | 9.1 | 9.5 | 10.2 | 9.3 | 9.0 | 9.6 | 8.3 | 6.6 | 4.6 | 3.9 | 4.1 | 8.0 |

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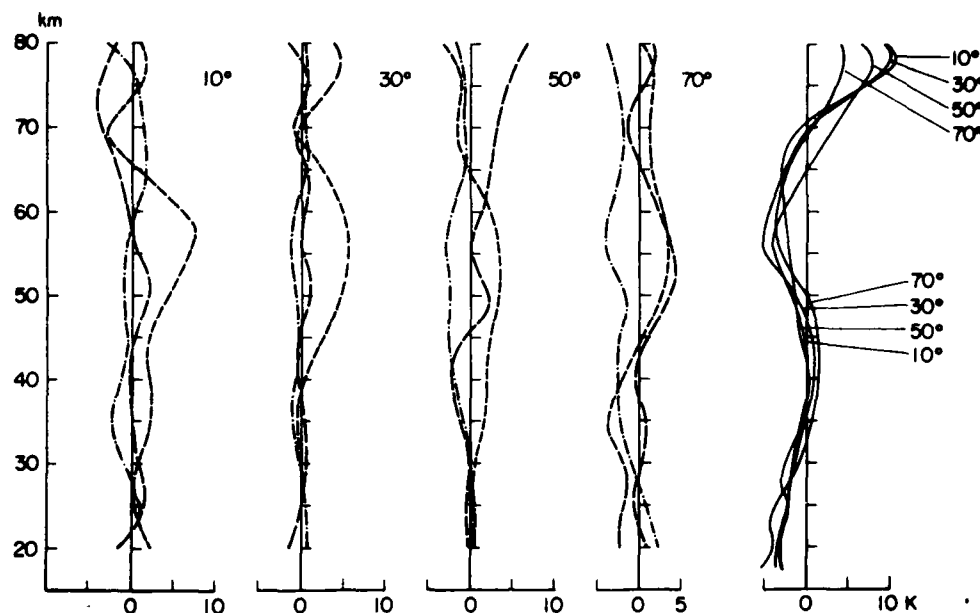
Figure 2. Comparisons of Rocket-Based and Satellite-Based Temperatures[1]
With the New Reference Temperatures. Averaged monthly mean rocket
minus reference temperatures are shown for the following rocket values:
—.—. Koshelkov;[3,4] —— —— —— Air Force Reference Atmospheres;[5] ------
CIRA 1972.[6] Averages are for 12 months at 10°, 30° latitude and for
December to May in the S hemisphere or April to September in the
N hemisphere at 50°, 70° latitude. Key: ———— monthly mean satellite
temperatures[1] minus reference temperatures averaged over 12 months

## 4. COMPARISONS OF LOWER-BOUNDARY PRESSURES

Comparisons of actual lower-boundary pressures adopted for the two N hemis-
phere rocket reference atmospheres with those adopted for the satellite tables are
not possible as the Air Force Reference Atmospheres adopted sea-level pressures,
CIRA 1972 adopted 30-km pressures and the satellite tables were tied to 30 mb mean
geopotential heights by averaging (for each month) the monthly means from January
1973 to December 1974 and from July 1975 to June 1978, these being the periods of
measurement of Nimbus 5 SCR and Nimbus 6 PMR respectively. Comparisons have
therefore been made at selected heights of relative pressure differences as these
are not sensitive to the particular heights chosen. Figure 3 shows the percentage
relative deviation of Air Force Reference Atmospheres pressure at 20 km and that
of CIRA 1972 at 30 km from the satellite tables, averaged over a number of months
according to the scheme described in Section 2. Air Force Reference Atmospheres
pressure at 20 km is at most nearly 2 percent higher while CIRA 1972 pressure at

30 km is at most 3 percent lower than that of the satellite tables, and it is concluded that the N hemisphere lower-boundary pressures of the satellite tables are compatible with the earlier rocket values and should be adopted without adjustment.
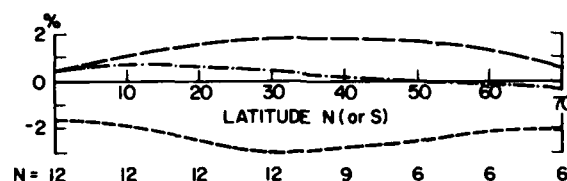


Figure 3. Comparisons of Lower-Boundary Pressures of Rocket-Based Tables With Those of Satellite-Based Tables[1] in Terms of the Average Monthly Mean Relative Pressure Difference for: — . — . Koshelkov Pressure at 20 km;[4] — — — Air Force Reference Atmospheres Pressure at 20 km;[5] — — — — — CIRA 1972 Pressure at 30 km.[6] Averages are taken over N different monthly means according to the scheme described in Section 2

In the S hemisphere both rocket and satellite tables are based on the 30 mb mean geopotential heights of radiosonde analyses, the rocket tables using data from 1957 to 1977 and the satellite tables from May 1968 to March 1973. Their relative pressure differences have been evaluated at 20 km and when averaged over a number of months according to the scheme introduced in Section 2 are found to be rather less than 1 percent for all latitudes (Figure 3).

The 30 mb mean geopotential heights of the satellite tables have therefore been adopted in both hemispheres and for each month their lower-boundary pressures are represented by a polynomial of degree 8 in sine of latitude, so making a total of 90 constants in terms of which latitudinal cross-sections of temperature and pressure may be formulated (Appendix B).

## 5. TABULATIONS OF ZONAL MEANS

Monthly means at each 10° latitude from 80° S to 80° N of the following zonal means are tabulated in Appendix A: temperature, pressure and density at 1-km intervals and number density, pressure scale height and geostrophic W-E wind at 2-km intervals from 18 to 80 km.

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Pressure scale height $H_{ref}$ is obtained from Eq. (B1) in Appendix B and $T_{ref}$ is calculated from $H_{ref}$ by Eq. (1). Pressure $p_{ref}$ is calculated from Eq. (B2) in Appendix B which is based on integration of the hydrostatic equation using $T_{ref}$ and the 30 mb geopotential heights of the satellite tables. Density $\rho_{ref}$ is calculated from

$$\rho_{ref} = M \, p_{ref}/RT_{ref} \tag{3}$$

and number density $N_{ref}$ from

$$N_{ref} = \rho_{ref}/A \tag{4}$$

where $A = 6.02257 \times 10^{26}$ mks units. The geostrophic W-E wind is calculated from Eq. (B3) in Appendix B at all the stated latitudes except 0° where it breaks down.

## 6. LONGITUDINAL DEPENDENCE OF TEMPERATURE

The satellite tables of temperature and geopotential height enable temperature $T_{sat}(\lambda)$ to be calculated at a given geometric height and longitude $\lambda$. Reference *temperatures* $T(\lambda)$ at longitude $\lambda$ are obtained by introducing the same adjustment as for zonal mean values, that is, we take

$$T(\lambda) = T_{sat}(\lambda) + (T_{ref} - T_{sat}) . \tag{5}$$

The longitudinal dependence of the adjustment is neglected on the assumption that it is a second-order effect, the longitudinal variation of temperature itself being a small first-order effect.

January mean temperatures at 60° N for $\lambda = 140°$, 100° and 10° W are presented in Air Force Reference Atmospheres to 55 km altitude and are compared with $T(\lambda)$ calculated from Eq. (5) in Figure 4. In general, observed temperatures at 35 to 45 km have a range of roughly 85K in winter[5] and hence monthly means are determined less accurately than at other times of the year. The curves in Figure 4 are considered to be in satisfactory agreement. The larger differences at 10° W may possibly be a consequence of a smaller sample of data at this longitude. On the other hand it should be noted that the satellite tables are based on measurements from at most five years and that below about 40 km only Nimbus 5 SCR data from 1973 and 1974 are represented.

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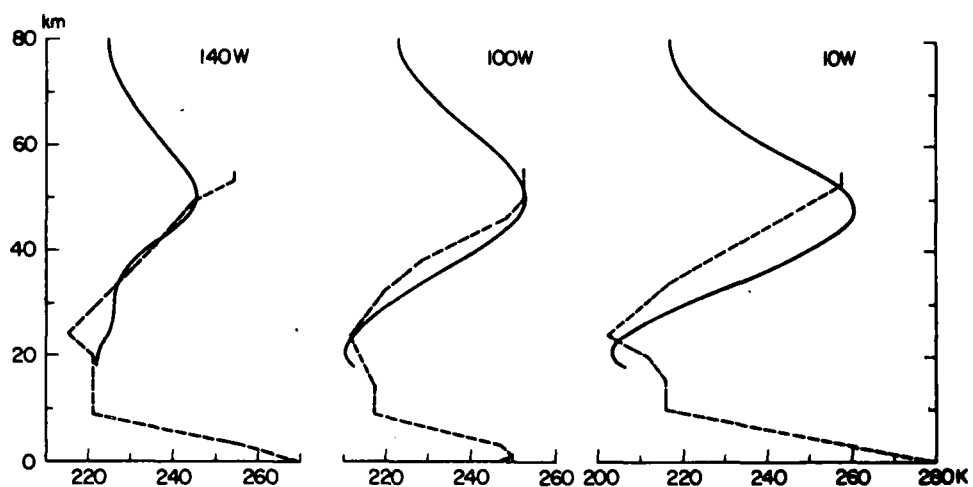
Figure 4. Comparisons of January Mean Temperature at Longitudes
$\lambda$ = 140°, 100° and 10° W. Key: — — — — — Air Force Reference
Atmospheres;[5] ————— new reference temperatures at longitude $\lambda$
[Eq. (5)]

The differences $T(\lambda) - T_{ref}$ have been calculated from Eq. (5) at 30° longitude
steps and heights 18, 20, 24, ..., 80 km for the sequence of eight months in each
hemisphere during which longitudinal variations are largest. These months are
September to April in the N hemisphere and April to November in the S hemisphere.
Tabulations are presented in Appendix A for 20°, 30°, ..., 80° latitude and 180°,
150°W, ..., 150° E longitude. In Appendix B, Eq. (B4) is presented which approxi-
mates these values, differing by not more than 1K in all but a few cases.

## 7. LONGITUDINAL DEPENDENCE OF PRESSURE AND DENSITY

For a given height, reference pressures $p(\lambda)$ are adopted at longitude according
to the relation

$$p(\lambda)/p_{ref} = p_{sat}(\lambda)/p_{sat} \tag{6}$$

where $p_{sat}(\lambda)$ is pressure at longitude $\lambda$ as determined by the satellite tables[1] and
$p_{sat}$ is the zonal mean pressure. Tabulations are presented in Appendix A of
$100[p(\lambda)/p_{ref} - 1]$, calculated by Eq. (6). In the same way the percentage relative
longitudinal deviations of density $100[\rho(\lambda)/\rho_{ref} - 1]$ are calculated and tabulated in
Appendix A. Values of this quantity at $\lambda$ = 140°, 100° and 10° W are compared in
Figure 5 corresponding to the cases in Figure 4. In Appendix B, Eqs. (B5) and (B6)

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enable values of $p(\lambda)$ and $\rho\,(\lambda)$ to be computed which closely approximate those obtained from the tables of Appendix A, differing by at most 1 percent.
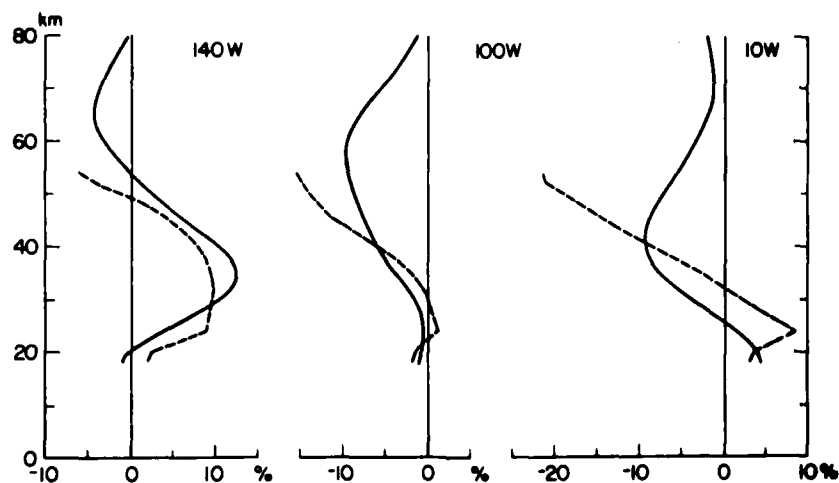


Figure 5. Comparisons of January Mean Relative Density Deviations From the Zonal Mean Reference Densities at Longitudes $\lambda = 140°$, $100°$ and $10°$ W. Key: — — — — Air Force Reference Atmospheres;[5] —————— new reference densities at longitude $\lambda$

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# Appendix A

**Tables of Monthly Mean Atmospheric Properties**
**18 to 80 km and 80° S to 80° N**

1. Zonal Mean Values

   Temperature (K)
   Pressure (mb)
   Density (kg m$^{-3}$)
   Number density (m$^{-3}$)
   Pressure scale height (km)
   Geostrophic W-E wind (m s$^{-1}$)

2. Longitudinal variations

   | | |
   |---|---|
   | Temperature | - (zonal mean temperature) (K) |
   | Pressure/(zonal mean pressure) | - 1 (%) |
   | Density/(zonal mean density) | - 1 (%) |

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 232.5 | 231.4 | 227.5 | 220.4 | 212.3 | 206.0 | 202.7 | 201.9 | 201.9 | 202.6 | 204.9 | 209.5 | 214.5 | 216.4 | 213.2 | 206.7 | 200.9 |
| 19 | 232.5 | 231.4 | 227.8 | 221.5 | 214.3 | 208.6 | 205.5 | 204.3 | 203.7 | 203.6 | 205.4 | 209.6 | 214.4 | 216.0 | 212.2 | 204.9 | 198.2 |
| 20 | 233.0 | 231.8 | 228.4 | 222.7 | 216.2 | 211.1 | 208.1 | 206.7 | 205.7 | 205.3 | 206.7 | 210.6 | 215.1 | 216.3 | 212.1 | 204.1 | 197.0 |
| 21 | 233.8 | 232.6 | 229.4 | 224.0 | 218.1 | 213.4 | 210.6 | 209.0 | 207.8 | 207.3 | 208.6 | 212.1 | 216.2 | 217.1 | 212.5 | 204.3 | 196.9 |
| 22 | 234.8 | 233.6 | 230.5 | 225.5 | 220.0 | 215.6 | 212.9 | 211.3 | 210.1 | 209.6 | 210.8 | 214.0 | 217.6 | 218.1 | 213.4 | 205.1 | 197.7 |
| 23 | 236.0 | 234.8 | 231.9 | 227.2 | 222.0 | 217.8 | 215.1 | 213.6 | 212.5 | 212.1 | 213.2 | 216.0 | 219.1 | 219.2 | 214.5 | 206.5 | 199.3 |
| 24 | 237.4 | 236.2 | 233.4 | 228.9 | 224.0 | 219.9 | 217.3 | 215.9 | 214.9 | 214.7 | 215.7 | 218.1 | 220.6 | 220.4 | 215.9 | 208.3 | 201.4 |
| 25 | 238.9 | 237.8 | 235.1 | 230.8 | 226.0 | 222.1 | 219.6 | 218.1 | 217.4 | 217.3 | 218.2 | 220.1 | 222.0 | 221.6 | 217.4 | 210.4 | 204.0 |
| 26 | 240.5 | 239.5 | 237.0 | 232.8 | 228.2 | 224.3 | 221.8 | 220.4 | 219.8 | 219.9 | 220.7 | 222.1 | 223.4 | 222.8 | 219.0 | 212.7 | 206.9 |
| 27 | 242.2 | 241.4 | 238.9 | 234.9 | 230.4 | 226.6 | 224.0 | 222.7 | 222.3 | 222.5 | 223.1 | 224.0 | 224.7 | 224.0 | 220.7 | 215.2 | 210.1 |
| 28 | 244.1 | 243.3 | 241.0 | 237.2 | 232.8 | 228.9 | 226.4 | 225.1 | 224.8 | 225.1 | 225.6 | 225.9 | 226.0 | 225.2 | 222.4 | 217.8 | 213.4 |
| 29 | 246.0 | 245.4 | 243.2 | 239.5 | 235.2 | 231.4 | 228.7 | 227.4 | 227.3 | 227.7 | 227.9 | 227.8 | 227.3 | 226.4 | 224.2 | 220.5 | 216.8 |
| 30 | 248.1 | 247.6 | 245.6 | 241.9 | 237.6 | 233.8 | 231.1 | 229.9 | 229.8 | 230.2 | 230.3 | 229.6 | 228.7 | 227.7 | 226.0 | 223.1 | 220.1 |
| 31 | 250.3 | 249.9 | 248.0 | 244.4 | 240.2 | 236.4 | 233.6 | 232.3 | 232.3 | 232.8 | 232.6 | 231.5 | 230.2 | 229.1 | 227.8 | 225.7 | 223.3 |
| 32 | 252.5 | 252.2 | 250.4 | 247.0 | 242.8 | 238.9 | 236.2 | 234.8 | 234.8 | 235.3 | 235.0 | 233.5 | 231.7 | 230.6 | 229.7 | 228.3 | 226.5 |
| 33 | 254.9 | 254.7 | 253.0 | 249.6 | 245.4 | 241.6 | 238.7 | 237.3 | 237.3 | 237.8 | 237.3 | 235.5 | 233.5 | 232.2 | 231.7 | 230.7 | 229.4 |
| 34 | 257.3 | 257.2 | 255.6 | 252.2 | 248.1 | 244.2 | 241.3 | 239.9 | 239.9 | 240.3 | 239.8 | 237.7 | 235.4 | 234.0 | 233.6 | 233.1 | 232.2 |
| 35 | 259.8 | 259.8 | 258.2 | 254.8 | 250.7 | 246.9 | 244.0 | 242.5 | 242.4 | 242.9 | 242.2 | 240.0 | 237.4 | 235.9 | 235.6 | 235.4 | 234.7 |
| 36 | 262.4 | 262.4 | 260.8 | 257.5 | 253.4 | 249.6 | 246.6 | 245.0 | 244.9 | 245.4 | 244.7 | 242.4 | 239.6 | 238.0 | 237.7 | 237.5 | 237.0 |
| 37 | 265.0 | 265.0 | 263.4 | 260.0 | 256.0 | 252.2 | 249.2 | 247.6 | 247.5 | 247.9 | 247.3 | 244.9 | 241.9 | 240.1 | 239.7 | 239.5 | 239.1 |
| 38 | 267.6 | 267.5 | 265.9 | 262.6 | 258.5 | 254.8 | 251.8 | 250.1 | 250.0 | 250.4 | 249.9 | 247.4 | 244.4 | 242.3 | 241.7 | 241.4 | 241.0 |
| 39 | 270.2 | 270.1 | 268.3 | 265.0 | 261.0 | 257.3 | 254.3 | 252.6 | 252.4 | 252.9 | 252.4 | 250.0 | 246.8 | 244.5 | 243.6 | 243.2 | 242.7 |
| 40 | 272.8 | 272.5 | 270.7 | 267.3 | 263.3 | 259.6 | 256.7 | 255.0 | 254.8 | 255.4 | 254.9 | 252.6 | 249.3 | 246.7 | 245.5 | 244.9 | 244.3 |
| 41 | 275.2 | 274.8 | 272.9 | 269.4 | 265.5 | 261.8 | 258.9 | 257.3 | 257.1 | 257.7 | 257.4 | 255.1 | 251.7 | 248.9 | 247.3 | 246.4 | 245.7 |
| 42 | 277.6 | 277.0 | 274.9 | 271.4 | 267.4 | 263.9 | 261.1 | 259.4 | 259.3 | 259.9 | 259.7 | 257.5 | 254.0 | 250.8 | 248.9 | 247.8 | 247.0 |
| 43 | 279.8 | 279.0 | 276.7 | 273.1 | 269.2 | 265.7 | 263.0 | 261.4 | 261.3 | 262.0 | 261.9 | 259.7 | 256.0 | 252.6 | 250.3 | 249.0 | 248.2 |
| 44 | 281.7 | 280.8 | 278.3 | 274.6 | 270.7 | 267.3 | 264.7 | 263.2 | 263.2 | 263.9 | 263.8 | 261.6 | 257.8 | 254.1 | 251.6 | 250.2 | 249.4 |
| 45 | 283.5 | 282.4 | 279.7 | 275.9 | 272.0 | 268.7 | 266.2 | 264.9 | 264.8 | 265.6 | 265.5 | 263.2 | 259.3 | 255.3 | 252.6 | 251.2 | 250.5 |
| 46 | 285.0 | 283.6 | 280.7 | 276.8 | 272.9 | 269.8 | 267.5 | 266.2 | 266.3 | 267.0 | 266.9 | 264.5 | 260.3 | 256.2 | 253.4 | 252.0 | 251.5 |
| 47 | 286.2 | 284.6 | 281.5 | 277.4 | 273.5 | 270.5 | 268.4 | 267.3 | 267.5 | 268.2 | 267.9 | 265.3 | 260.9 | 256.6 | 253.9 | 252.7 | 252.5 |
| 48 | 287.0 | 285.3 | 281.9 | 277.7 | 273.8 | 270.9 | 269.1 | 268.2 | 268.4 | 269.0 | 268.5 | 265.6 | 261.0 | 256.7 | 254.1 | 253.3 | 253.4 |
| 49 | 287.6 | 285.6 | 282.0 | 277.6 | 273.7 | 271.0 | 269.4 | 268.7 | 269.0 | 269.5 | 268.8 | 265.5 | 260.7 | 256.3 | 253.9 | 253.6 | 254.3 |
| 50 | 287.7 | 285.5 | 281.7 | 277.2 | 273.2 | 270.7 | 269.3 | 268.9 | 269.3 | 269.7 | 268.6 | 265.0 | 259.8 | 255.5 | 253.5 | 253.8 | 255.0 |
| 51 | 287.5 | 285.2 | 281.1 | 276.4 | 272.4 | 270.0 | 268.9 | 268.8 | 269.3 | 269.5 | 268.0 | 263.9 | 258.6 | 254.3 | 252.8 | 253.8 | 255.6 |
| 52 | 287.0 | 284.4 | 280.1 | 275.2 | 271.2 | 269.0 | 268.2 | 268.4 | 269.0 | 269.0 | 267.0 | 262.5 | 256.9 | 252.8 | 251.9 | 253.6 | 256.1 |
| 53 | 286.1 | 283.3 | 278.8 | 273.7 | 269.7 | 267.6 | 267.1 | 267.6 | 268.3 | 268.1 | 265.6 | 260.6 | 254.9 | 251.0 | 250.7 | 253.2 | 256.4 |
| 54 | 284.8 | 281.9 | 277.2 | 271.8 | 267.7 | 265.8 | 265.7 | 266.5 | 267.2 | 266.8 | 263.9 | 258.5 | 252.6 | 249.0 | 249.2 | 252.6 | 256.5 |
| 55 | 283.1 | 280.2 | 275.2 | 269.7 | 265.5 | 263.7 | 263.9 | 265.0 | 265.9 | 265.2 | 261.9 | 256.0 | 250.1 | 246.8 | 247.6 | 251.7 | 256.3 |
| 56 | 281.2 | 278.1 | 272.9 | 267.2 | 262.9 | 261.3 | 261.8 | 263.2 | 264.2 | 263.3 | 259.6 | 253.4 | 247.4 | 244.4 | 245.9 | 250.7 | 255.9 |
| 57 | 278.9 | 275.7 | 270.4 | 264.4 | 260.1 | 258.6 | 259.4 | 261.2 | 262.2 | 261.2 | 257.0 | 250.7 | 244.7 | 242.0 | 244.0 | 249.4 | 255.2 |
| 58 | 276.3 | 273.1 | 267.6 | 261.4 | 257.0 | 255.6 | 256.7 | 258.8 | 260.0 | 258.7 | 254.3 | 247.8 | 242.0 | 239.7 | 242.1 | 248.0 | 254.1 |
| 59 | 273.5 | 270.1 | 264.5 | 258.2 | 253.7 | 252.4 | 253.8 | 256.2 | 257.4 | 256.1 | 251.5 | 245.0 | 239.3 | 237.4 | 240.2 | 246.4 | 252.8 |
| 60 | 270.3 | 267.0 | 261.2 | 254.8 | 250.2 | 249.1 | 250.7 | 253.3 | 254.6 | 253.2 | 248.6 | 242.1 | 236.8 | 235.1 | 238.2 | 244.7 | 251.1 |
| 61 | 267.0 | 263.6 | 257.7 | 251.1 | 246.6 | 245.6 | 247.4 | 250.2 | 251.6 | 250.1 | 245.6 | 239.4 | 234.4 | 233.1 | 236.3 | 242.8 | 249.2 |
| 62 | 263.3 | 259.9 | 254.0 | 247.4 | 242.9 | 241.9 | 244.0 | 246.9 | 248.4 | 246.9 | 242.5 | 236.8 | 232.2 | 231.2 | 234.5 | 240.9 | 247.0 |
| 63 | 259.5 | 256.1 | 250.2 | 243.5 | 239.0 | 238.3 | 240.5 | 243.5 | 245.0 | 243.6 | 239.5 | 234.2 | 230.2 | 229.5 | 232.8 | 238.9 | 244.7 |
| 64 | 255.4 | 252.1 | 246.2 | 239.6 | 235.2 | 234.5 | 236.9 | 240.0 | 241.4 | 240.2 | 236.5 | 231.8 | 228.3 | 227.9 | 231.2 | 236.9 | 242.2 |
| 65 | 251.1 | 247.9 | 242.0 | 235.6 | 231.3 | 230.8 | 233.3 | 236.3 | 237.7 | 236.7 | 233.5 | 229.5 | 226.7 | 226.6 | 229.7 | 234.9 | 239.6 |
| 66 | 246.6 | 243.4 | 237.8 | 231.5 | 227.5 | 227.2 | 229.7 | 232.6 | 234.0 | 233.1 | 230.5 | 227.4 | 225.2 | 225.4 | 228.4 | 232.9 | 237.0 |
| 67 | 241.9 | 238.9 | 233.4 | 227.4 | 223.7 | 223.6 | 226.1 | 228.9 | 230.1 | 229.5 | 227.6 | 225.3 | 223.9 | 224.4 | 227.1 | 231.1 | 234.4 |
| 68 | 236.9 | 234.1 | 228.9 | 223.3 | 220.0 | 220.1 | 222.6 | 225.2 | 226.3 | 225.9 | 224.6 | 223.3 | 222.6 | 223.5 | 226.0 | 229.3 | 232.0 |
| 69 | 231.8 | 229.1 | 224.4 | 219.2 | 216.4 | 216.8 | 219.2 | 221.5 | 222.4 | 222.2 | 221.7 | 221.3 | 221.4 | 222.7 | 225.0 | 227.7 | 229.8 |
| 70 | 226.5 | 224.0 | 219.7 | 215.2 | 212.9 | 213.6 | 216.0 | 217.9 | 218.6 | 218.6 | 218.8 | 219.2 | 220.2 | 221.9 | 224.2 | 226.3 | 227.8 |
| 71 | 221.0 | 218.8 | 215.0 | 211.1 | 209.5 | 210.6 | 212.9 | 214.4 | 214.8 | 215.0 | 215.8 | 217.2 | 218.9 | 221.1 | 223.4 | 225.1 | 226.0 |
| 72 | 215.3 | 213.4 | 210.2 | 207.1 | 206.3 | 207.8 | 210.0 | 211.1 | 211.2 | 211.6 | 213.0 | 215.1 | 217.4 | 220.2 | 222.6 | 224.2 | 224.7 |
| 73 | 209.5 | 207.9 | 205.3 | 203.2 | 203.2 | 205.2 | 207.4 | 208.0 | 207.8 | 208.2 | 210.1 | 213.0 | 216.1 | 219.2 | 221.9 | 223.4 | 223.6 |
| 74 | 203.6 | 202.3 | 200.4 | 199.2 | 200.2 | 202.8 | 204.9 | 205.2 | 204.6 | 205.1 | 207.4 | 210.8 | 214.5 | 218.2 | 221.3 | 222.9 | 222.9 |
| 75 | 197.7 | 196.7 | 195.4 | 195.4 | 197.4 | 200.7 | 202.8 | 202.6 | 201.7 | 202.3 | 204.8 | 208.6 | 212.8 | 217.1 | 220.7 | 222.5 | 222.5 |
| 76 | 191.7 | 191.0 | 190.5 | 191.5 | 194.7 | 198.7 | 200.8 | 200.5 | 199.3 | 199.8 | 202.5 | 206.5 | 211.1 | 216.0 | 220.2 | 222.3 | 222.4 |
| 77 | 185.8 | 185.3 | 185.6 | 187.8 | 192.2 | 197.0 | 199.4 | 198.8 | 197.4 | 197.8 | 200.5 | 204.7 | 209.6 | 215.0 | 219.7 | 222.2 | 222.2 |
| 78 | 180.0 | 179.7 | 180.7 | 184.0 | 189.7 | 195.5 | 198.2 | 197.6 | 196.1 | 196.5 | 199.1 | 203.3 | 208.4 | 214.3 | 219.4 | 222.0 | 222.0 |
| 79 | 174.4 | 174.3 | 175.8 | 180.3 | 187.3 | 194.1 | 197.4 | 197.0 | 195.7 | 196.0 | 198.5 | 202.6 | 207.9 | 214.0 | 219.3 | 221.7 | 221.3 |
| 80 | 169.1 | 168.9 | 171.0 | 176.7 | 185.0 | 192.9 | 197.0 | 197.2 | 196.3 | 196.7 | 199.0 | 202.9 | 208.4 | 214.7 | 219.6 | 221.1 | 219.7 |

14

ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 229.7 | 228.2 | 224.9 | 219.5 | 213.1 | 207.3 | 203.4 | 201.3 | 200.6 | 201.1 | 203.7 | 208.6 | 214.2 | 217.9 | 217.4 | 213.8 | 210.0 |
| 19 | 229.4 | 227.9 | 224.7 | 219.9 | 214.2 | 209.0 | 205.2 | 202.9 | 201.6 | 201.7 | 203.8 | 208.4 | 214.1 | 217.7 | 216.7 | 212.0 | 206.9 |
| 20 | 229.4 | 228.0 | 225.1 | 220.7 | 215.5 | 210.9 | 207.3 | 204.9 | 203.4 | 203.2 | 205.0 | 209.2 | 214.6 | 217.9 | 216.6 | 211.4 | 205.8 |
| 21 | 229.8 | 228.5 | 225.8 | 221.7 | 217.0 | 212.8 | 209.6 | 207.3 | 205.7 | 205.4 | 206.9 | 210.7 | 215.4 | 218.2 | 216.7 | 211.6 | 206.1 |
| 22 | 230.3 | 229.3 | 226.8 | 223.0 | 218.7 | 214.9 | 212.0 | 209.8 | 208.4 | 208.0 | 209.3 | 212.5 | 216.3 | 218.6 | 217.1 | 212.4 | 207.3 |
| 23 | 231.1 | 230.3 | 228.0 | 224.4 | 220.4 | 217.0 | 214.4 | 212.4 | 211.1 | 210.9 | 212.0 | 214.5 | 217.4 | 219.1 | 217.7 | 213.5 | 209.0 |
| 24 | 232.0 | 231.5 | 229.4 | 225.9 | 222.2 | 219.2 | 216.9 | 215.1 | 214.0 | 213.9 | 214.9 | 216.7 | 218.6 | 219.6 | 218.4 | 215.0 | 211.2 |
| 25 | 233.1 | 232.9 | 231.0 | 227.6 | 224.2 | 221.5 | 219.4 | 217.8 | 216.8 | 216.9 | 217.8 | 218.9 | 219.8 | 220.1 | 219.2 | 216.5 | 213.5 |
| 26 | 234.4 | 234.4 | 232.6 | 229.4 | 226.2 | 223.8 | 221.9 | 220.4 | 219.7 | 220.0 | 220.7 | 221.1 | 221.0 | 220.8 | 220.0 | 218.1 | 215.9 |
| 27 | 235.9 | 236.0 | 234.4 | 231.3 | 228.3 | 226.1 | 224.5 | 223.1 | 222.5 | 223.0 | 223.6 | 223.3 | 222.3 | 221.5 | 220.9 | 219.7 | 218.2 |
| 28 | 237.5 | 237.8 | 236.3 | 233.3 | 230.4 | 228.5 | 227.0 | 225.7 | 225.3 | 225.9 | 226.4 | 225.5 | 223.7 | 222.4 | 221.9 | 221.3 | 220.3 |
| 29 | 239.2 | 239.7 | 238.3 | 235.4 | 232.7 | 230.9 | 229.6 | 228.3 | 228.0 | 228.7 | 229.1 | 227.7 | 225.2 | 223.4 | 222.9 | 222.7 | 222.2 |
| 30 | 241.1 | 241.6 | 240.4 | 237.6 | 235.0 | 233.4 | 232.1 | 231.0 | 230.7 | 231.6 | 231.8 | 229.9 | 226.8 | 224.6 | 224.1 | 224.1 | 223.9 |
| 31 | 243.1 | 243.7 | 242.5 | 239.9 | 237.5 | 236.0 | 234.8 | 233.6 | 233.5 | 234.3 | 234.5 | 232.2 | 228.6 | 226.0 | 225.3 | 225.5 | 225.4 |
| 32 | 245.2 | 245.9 | 244.8 | 242.2 | 239.9 | 238.6 | 237.4 | 236.3 | 236.2 | 237.1 | 237.1 | 234.6 | 230.6 | 227.6 | 226.7 | 226.7 | 226.6 |
| 33 | 247.5 | 248.1 | 247.1 | 244.7 | 242.5 | 241.2 | 240.1 | 239.1 | 239.0 | 239.9 | 239.8 | 237.0 | 232.7 | 229.4 | 228.2 | 228.0 | 227.8 |
| 34 | 249.8 | 250.4 | 249.5 | 247.2 | 245.1 | 243.8 | 242.8 | 241.8 | 241.9 | 242.7 | 242.4 | 239.5 | 235.0 | 231.4 | 229.8 | 229.2 | 228.8 |
| 35 | 252.2 | 252.8 | 251.9 | 249.8 | 247.7 | 246.5 | 245.5 | 244.7 | 244.8 | 245.6 | 245.2 | 242.1 | 237.5 | 233.6 | 231.5 | 230.5 | 229.7 |
| 36 | 254.6 | 255.2 | 254.4 | 252.4 | 250.4 | 249.1 | 248.1 | 247.5 | 247.7 | 248.4 | 247.9 | 244.8 | 240.1 | 235.9 | 233.3 | 231.7 | 230.7 |
| 37 | 257.1 | 257.6 | 256.8 | 255.0 | 253.0 | 251.7 | 250.8 | 250.4 | 250.7 | 251.3 | 250.6 | 247.5 | 242.8 | 238.3 | 235.2 | 233.1 | 231.6 |
| 38 | 259.6 | 259.9 | 259.3 | 257.5 | 255.6 | 254.2 | 253.4 | 253.2 | 253.7 | 254.2 | 253.4 | 250.3 | 245.6 | 240.8 | 237.1 | 234.5 | 232.7 |
| 39 | 262.0 | 262.3 | 261.7 | 260.0 | 258.1 | 256.6 | 255.9 | 256.0 | 256.7 | 257.1 | 256.1 | 253.0 | 248.4 | 243.4 | 239.1 | 235.9 | 233.9 |
| 40 | 264.4 | 264.5 | 264.0 | 262.5 | 260.5 | 258.9 | 258.4 | 258.7 | 259.6 | 259.9 | 258.8 | 255.7 | 251.1 | 245.9 | 241.1 | 237.5 | 235.2 |
| 41 | 266.6 | 266.7 | 266.2 | 264.8 | 262.7 | 261.1 | 260.6 | 261.3 | 262.3 | 262.6 | 261.4 | 258.3 | 253.7 | 248.3 | 243.1 | 239.1 | 236.7 |
| 42 | 268.7 | 268.7 | 268.3 | 266.9 | 264.8 | 263.1 | 262.7 | 263.7 | 264.9 | 265.2 | 263.8 | 260.7 | 256.1 | 250.5 | 245.1 | 240.8 | 238.4 |
| 43 | 270.7 | 270.6 | 270.1 | 268.7 | 266.6 | 264.8 | 264.6 | 265.9 | 267.3 | 267.5 | 266.0 | 262.9 | 258.3 | 252.6 | 246.9 | 242.6 | 240.3 |
| 44 | 272.5 | 272.3 | 271.7 | 270.4 | 268.1 | 266.3 | 266.2 | 267.7 | 269.4 | 269.6 | 267.9 | 264.7 | 260.1 | 254.3 | 248.6 | 244.5 | 242.4 |
| 45 | 274.0 | 273.7 | 273.1 | 271.7 | 269.4 | 267.5 | 267.5 | 269.3 | 271.2 | 271.3 | 269.5 | 266.2 | 261.5 | 255.8 | 250.1 | 246.3 | 244.7 |
| 46 | 275.3 | 274.9 | 274.2 | 272.7 | 270.3 | 268.4 | 268.5 | 270.5 | 272.6 | 272.7 | 270.7 | 267.2 | 262.5 | 256.8 | 251.5 | 248.1 | 247.1 |
| 47 | 276.4 | 275.8 | 274.9 | 273.3 | 270.8 | 268.9 | 269.1 | 271.4 | 273.5 | 273.6 | 271.5 | 267.8 | 263.0 | 257.4 | 252.5 | 249.9 | 249.5 |
| 48 | 277.1 | 276.4 | 275.3 | 273.5 | 271.0 | 269.1 | 269.4 | 271.8 | 274.0 | 274.1 | 271.8 | 268.0 | 263.0 | 257.6 | 253.4 | 251.7 | 252.1 |
| 49 | 277.6 | 276.7 | 275.3 | 273.3 | 270.7 | 269.0 | 269.4 | 271.8 | 274.0 | 274.1 | 271.7 | 267.6 | 262.6 | 257.4 | 253.9 | 253.2 | 254.6 |
| 50 | 277.8 | 276.6 | 275.0 | 272.7 | 270.1 | 268.4 | 269.0 | 271.4 | 273.6 | 273.6 | 271.1 | 266.8 | 261.6 | 256.8 | 254.2 | 254.7 | 257.0 |
| 51 | 277.6 | 276.3 | 274.3 | 271.7 | 269.1 | 267.6 | 268.2 | 270.5 | 272.6 | 272.6 | 270.0 | 265.4 | 260.2 | 255.8 | 254.1 | 255.9 | 259.4 |
| 52 | 277.2 | 275.4 | 273.2 | 270.3 | 267.7 | 266.4 | 267.1 | 269.3 | 271.3 | 271.2 | 268.5 | 263.7 | 258.5 | 254.4 | 253.8 | 256.9 | 261.4 |
| 53 | 276.5 | 274.6 | 271.8 | 268.5 | 265.9 | 264.8 | 265.7 | 267.8 | 269.5 | 269.3 | 266.5 | 261.6 | 256.2 | 252.8 | 253.1 | 257.5 | 263.2 |
| 54 | 275.4 | 273.3 | 270.0 | 266.4 | 263.8 | 263.0 | 264.0 | 265.9 | 267.4 | 267.1 | 264.2 | 259.2 | 253.8 | 250.8 | 252.3 | 257.9 | 264.6 |
| 55 | 274.1 | 271.7 | 267.9 | 264.0 | 261.4 | 260.8 | 262.0 | 263.7 | 265.0 | 264.5 | 261.6 | 256.5 | 251.2 | 248.8 | 251.1 | 257.9 | 265.6 |
| 56 | 272.5 | 269.7 | 265.5 | 261.3 | 258.7 | 258.5 | 259.7 | 261.3 | 262.3 | 261.7 | 258.8 | 253.7 | 248.5 | 246.6 | 249.8 | 257.6 | 266.1 |
| 57 | 270.6 | 267.6 | 262.9 | 258.4 | 255.9 | 255.9 | 257.3 | 258.7 | 259.4 | 258.7 | 255.8 | 250.8 | 245.8 | 244.3 | 248.3 | 257.0 | 266.1 |
| 58 | 268.4 | 265.1 | 260.1 | 255.2 | 252.8 | 253.1 | 254.7 | 256.0 | 256.3 | 255.5 | 252.6 | 247.8 | 243.1 | 242.0 | 246.7 | 256.0 | 265.5 |
| 59 | 266.0 | 262.5 | 257.0 | 251.9 | 249.6 | 250.2 | 252.0 | 253.1 | 253.2 | 252.2 | 249.4 | 244.8 | 240.4 | 239.8 | 244.9 | 254.6 | 264.3 |
| 60 | 263.4 | 259.6 | 253.8 | 248.5 | 246.2 | 247.1 | 249.1 | 250.1 | 249.9 | 248.8 | 246.2 | 241.9 | 237.9 | 237.7 | 243.2 | 253.0 | 262.7 |
| 61 | 260.4 | 256.5 | 250.5 | 245.0 | 242.8 | 244.0 | 246.1 | 247.1 | 246.7 | 245.5 | 243.0 | 239.0 | 235.5 | 235.6 | 241.3 | 251.1 | 260.5 |
| 62 | 257.3 | 253.2 | 247.0 | 241.5 | 239.4 | 240.8 | 243.1 | 244.0 | 243.4 | 242.2 | 239.9 | 236.3 | 233.2 | 233.8 | 239.5 | 249.0 | 258.0 |
| 63 | 253.8 | 249.7 | 243.4 | 237.9 | 236.0 | 237.6 | 240.0 | 240.9 | 240.1 | 238.9 | 236.9 | 233.8 | 231.2 | 232.0 | 237.7 | 246.7 | 255.0 |
| 64 | 250.2 | 246.0 | 239.8 | 234.3 | 232.6 | 234.3 | 236.9 | 237.7 | 236.9 | 235.6 | 233.9 | 231.4 | 229.4 | 230.5 | 236.0 | 244.3 | 251.9 |
| 65 | 246.3 | 242.2 | 236.0 | 230.8 | 229.2 | 231.1 | 233.7 | 234.5 | 233.7 | 232.5 | 231.1 | 229.1 | 227.7 | 229.1 | 234.3 | 241.9 | 248.5 |
| 66 | 242.1 | 238.1 | 232.2 | 227.3 | 225.9 | 227.9 | 230.6 | 231.3 | 230.4 | 229.3 | 228.3 | 227.0 | 226.2 | 227.8 | 232.7 | 239.4 | 245.1 |
| 67 | 237.7 | 233.9 | 228.4 | 223.8 | 222.6 | 224.7 | 227.4 | 228.1 | 227.2 | 226.3 | 225.7 | 225.0 | 224.8 | 226.6 | 231.2 | 237.0 | 241.7 |
| 68 | 233.1 | 229.6 | 224.5 | 220.3 | 219.4 | 221.6 | 224.2 | 224.8 | 224.0 | 223.3 | 223.2 | 223.1 | 223.5 | 225.5 | 229.7 | 234.7 | 238.4 |
| 69 | 228.3 | 225.1 | 220.6 | 216.9 | 216.4 | 218.6 | 221.0 | 221.5 | 220.7 | 220.3 | 220.7 | 221.2 | 222.1 | 224.5 | 228.4 | 232.5 | 235.3 |
| 70 | 223.3 | 220.5 | 216.6 | 213.5 | 213.4 | 215.6 | 217.8 | 218.1 | 217.4 | 217.4 | 218.2 | 219.4 | 220.8 | 223.4 | 227.1 | 230.5 | 232.4 |
| 71 | 218.2 | 215.8 | 212.5 | 210.2 | 210.5 | 212.7 | 214.6 | 214.7 | 214.1 | 214.5 | 215.8 | 217.5 | 219.4 | 222.3 | 225.9 | 228.7 | 229.8 |
| 72 | 213.0 | 211.1 | 208.5 | 206.9 | 207.7 | 210.0 | 211.5 | 211.4 | 210.9 | 211.6 | 213.4 | 215.5 | 217.9 | 221.1 | 224.7 | 227.0 | 227.6 |
| 73 | 207.7 | 206.2 | 204.4 | 203.7 | 205.0 | 207.3 | 208.5 | 208.0 | 207.6 | 208.7 | 211.0 | 213.5 | 216.2 | 219.8 | 223.6 | 225.6 | 225.6 |
| 74 | 202.5 | 201.4 | 200.3 | 200.5 | 202.4 | 204.8 | 205.6 | 204.8 | 204.5 | 206.0 | 208.7 | 211.4 | 214.5 | 218.4 | 222.5 | 224.4 | 224.1 |
| 75 | 197.4 | 196.6 | 196.2 | 197.3 | 199.9 | 202.4 | 202.9 | 201.8 | 201.5 | 203.3 | 206.4 | 209.3 | 212.6 | 217.0 | 221.4 | 223.4 | 222.8 |
| 76 | 192.4 | 191.9 | 192.2 | 194.2 | 197.6 | 200.3 | 200.5 | 199.1 | 198.9 | 201.0 | 204.2 | 207.2 | 210.6 | 215.5 | 220.4 | 222.6 | 221.7 |
| 77 | 187.7 | 187.4 | 188.2 | 191.1 | 195.3 | 198.3 | 198.4 | 196.9 | 196.7 | 198.9 | 202.2 | 205.2 | 208.8 | 214.1 | 219.5 | 221.8 | 220.8 |
| 78 | 183.4 | 183.1 | 184.4 | 188.2 | 193.2 | 196.7 | 196.8 | 195.3 | 195.2 | 197.5 | 200.6 | 203.5 | 207.2 | 212.9 | 218.7 | 221.1 | 219.8 |
| 79 | 179.6 | 179.2 | 180.8 | 185.3 | 191.3 | 195.4 | 195.9 | 194.7 | 194.7 | 196.8 | 199.6 | 202.3 | 206.2 | 212.2 | 218.1 | 220.2 | 218.6 |
| 80 | 176.4 | 175.7 | 177.4 | 182.7 | 189.5 | 194.5 | 195.9 | 195.4 | 195.6 | 197.3 | 199.4 | 201.9 | 206.0 | 212.3 | 217.8 | 219.1 | 216.9 |

ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 224.1 | 224.0 | 222.5 | 219.0 | 214.0 | 209.0 | 204.8 | 202.2 | 201.4 | 202.6 | 205.7 | 210.0 | 214.3 | 217.7 | 219.5 | 220.0 | 219.8 |
| 19 | 223.0 | 223.0 | 221.8 | 218.8 | 214.4 | 209.9 | 206.2 | 203.8 | 202.9 | 203.7 | 206.2 | 210.2 | 214.3 | 217.4 | 218.8 | 218.7 | 218.0 |
| 20 | 222.4 | 222.6 | 221.6 | 218.9 | 215.1 | 211.3 | 208.1 | 206.0 | 205.0 | 205.5 | 207.7 | 211.1 | 214.6 | 217.2 | 218.3 | 218.1 | 217.6 |
| 21 | 222.1 | 222.5 | 221.8 | 219.4 | 216.2 | 213.0 | 210.4 | 208.5 | 207.5 | 207.8 | 209.6 | 212.4 | 215.2 | 217.1 | 218.0 | 218.1 | 217.9 |
| 22 | 221.9 | 222.6 | 222.1 | 220.1 | 217.4 | 214.9 | 212.8 | 211.2 | 210.5 | 212.0 | 214.1 | 216.0 | 216.9 | 217.3 | 217.8 | 218.4 | 218.8 |
| 23 | 222.0 | 222.9 | 222.7 | 221.0 | 218.8 | 216.9 | 215.4 | 213.9 | 213.0 | 213.3 | 214.5 | 216.0 | 216.9 | 217.3 | 217.9 | 218.8 | 219.8 |
| 24 | 222.1 | 223.3 | 223.4 | 222.0 | 220.2 | 219.0 | 217.9 | 216.7 | 215.9 | 216.1 | 217.2 | 218.0 | 217.9 | 217.6 | 218.0 | 219.3 | 220.8 |
| 25 | 222.5 | 223.8 | 224.1 | 223.1 | 221.8 | 221.0 | 220.4 | 219.4 | 218.7 | 219.0 | 219.8 | 220.0 | 219.1 | 218.1 | 218.3 | 219.9 | 221.8 |
| 26 | 222.9 | 224.5 | 225.0 | 224.3 | 223.4 | 223.1 | 222.8 | 222.1 | 221.5 | 221.7 | 222.4 | 222.1 | 220.4 | 218.8 | 218.8 | 220.5 | 222.6 |
| 27 | 223.5 | 225.2 | 226.0 | 225.6 | 225.1 | 225.2 | 225.2 | 224.6 | 224.2 | 224.5 | 225.0 | 224.2 | 221.9 | 219.8 | 219.4 | 221.1 | 223.3 |
| 28 | 224.2 | 226.1 | 227.1 | 227.0 | 226.9 | 227.3 | 227.6 | 227.2 | 226.8 | 227.2 | 227.5 | 226.3 | 223.6 | 221.0 | 220.3 | 221.8 | 223.9 |
| 29 | 225.1 | 227.1 | 228.4 | 228.6 | 228.8 | 229.4 | 229.9 | 229.7 | 229.5 | 229.8 | 230.0 | 228.5 | 225.4 | 222.5 | 221.4 | 222.6 | 224.5 |
| 30 | 226.2 | 228.2 | 229.8 | 230.4 | 230.8 | 231.6 | 232.2 | 232.3 | 232.2 | 232.5 | 232.4 | 230.8 | 227.5 | 224.2 | 222.8 | 223.5 | 225.0 |
| 31 | 227.4 | 229.5 | 231.3 | 232.3 | 233.0 | 233.9 | 234.6 | 234.8 | 234.9 | 235.1 | 234.9 | 233.1 | 229.7 | 226.2 | 224.4 | 224.5 | 225.6 |
| 32 | 228.8 | 231.0 | 233.1 | 234.3 | 235.2 | 236.2 | 237.0 | 237.5 | 237.7 | 237.8 | 237.4 | 235.5 | 232.1 | 228.5 | 226.2 | 225.7 | 226.3 |
| 33 | 230.4 | 232.7 | 235.0 | 236.5 | 237.6 | 238.6 | 239.5 | 240.2 | 240.5 | 240.6 | 240.0 | 238.0 | 234.7 | 231.0 | 228.3 | 227.2 | 227.2 |
| 34 | 232.2 | 234.5 | 237.1 | 238.9 | 240.1 | 241.0 | 242.1 | 243.0 | 243.5 | 243.4 | 242.6 | 240.6 | 237.4 | 233.7 | 230.6 | 228.8 | 228.2 |
| 35 | 234.1 | 236.5 | 239.3 | 241.4 | 242.6 | 243.6 | 244.7 | 245.8 | 246.5 | 246.3 | 245.3 | 243.3 | 240.3 | 236.7 | 233.2 | 230.7 | 229.4 |
| 36 | 236.2 | 238.7 | 241.7 | 244.0 | 245.3 | 246.2 | 247.3 | 248.7 | 249.6 | 249.3 | 248.0 | 246.0 | 243.3 | 239.7 | 235.9 | 232.8 | 230.9 |
| 37 | 238.4 | 241.0 | 244.2 | 246.7 | 248.0 | 248.8 | 250.0 | 251.7 | 252.7 | 252.3 | 250.8 | 248.8 | 246.4 | 242.9 | 238.7 | 235.0 | 232.7 |
| 38 | 240.7 | 243.4 | 246.8 | 249.5 | 250.8 | 251.4 | 252.7 | 254.6 | 255.8 | 255.3 | 253.5 | 251.6 | 249.4 | 246.1 | 241.7 | 237.5 | 234.7 |
| 39 | 243.0 | 245.8 | 249.4 | 252.2 | 253.5 | 254.0 | 255.7 | 257.6 | 258.9 | 258.3 | 256.3 | 254.4 | 252.4 | 249.2 | 244.2 | 240.1 | 236.9 |
| 40 | 245.4 | 248.3 | 252.0 | 255.0 | 256.1 | 256.5 | 257.9 | 260.4 | 262.0 | 261.2 | 259.0 | 257.0 | 255.3 | 252.3 | 247.7 | 242.7 | 239.3 |
| 41 | 247.8 | 250.7 | 254.5 | 257.6 | 258.6 | 258.9 | 260.4 | 263.1 | 264.8 | 264.0 | 261.6 | 259.6 | 258.0 | 255.2 | 250.5 | 245.5 | 241.8 |
| 42 | 250.2 | 253.1 | 257.0 | 260.0 | 261.0 | 261.2 | 262.6 | 265.5 | 267.4 | 266.5 | 263.9 | 261.9 | 260.5 | 257.9 | 253.3 | 248.1 | 244.5 |
| 43 | 252.5 | 255.3 | 259.2 | 262.2 | 263.1 | 263.2 | 264.7 | 267.7 | 269.8 | 268.8 | 266.1 | 264.0 | 262.6 | 260.2 | 255.7 | 250.7 | 247.1 |
| 44 | 254.6 | 257.3 | 261.2 | 264.2 | 265.0 | 264.9 | 266.4 | 269.6 | 271.7 | 270.8 | 267.9 | 265.7 | 264.4 | 262.2 | 257.9 | 253.2 | 249.8 |
| 45 | 256.5 | 259.1 | 262.8 | 265.8 | 266.5 | 266.4 | 267.8 | 271.1 | 273.4 | 272.4 | 269.4 | 267.1 | 265.8 | 263.7 | 259.8 | 255.4 | 252.3 |
| 46 | 258.3 | 260.7 | 264.2 | 267.0 | 267.7 | 267.5 | 268.9 | 272.2 | 274.5 | 273.5 | 270.5 | 268.1 | 266.8 | 264.8 | 261.2 | 257.3 | 254.7 |
| 47 | 259.8 | 261.9 | 265.1 | 267.8 | 268.4 | 268.2 | 269.5 | 272.8 | 275.1 | 274.2 | 271.1 | 268.7 | 267.3 | 265.4 | 262.2 | 258.8 | 256.8 |
| 48 | 261.0 | 262.7 | 265.6 | 268.1 | 268.7 | 268.5 | 269.8 | 272.9 | 275.2 | 274.3 | 271.3 | 268.7 | 267.3 | 265.4 | 262.7 | 260.0 | 258.5 |
| 49 | 261.9 | 263.2 | 265.7 | 267.9 | 268.5 | 268.3 | 269.6 | 272.6 | 274.8 | 273.9 | 271.0 | 268.4 | 266.8 | 265.0 | 262.7 | 260.7 | 259.9 |
| 50 | 262.4 | 263.3 | 265.3 | 267.3 | 267.9 | 267.8 | 269.0 | 271.8 | 273.9 | 273.0 | 270.2 | 267.6 | 265.9 | 264.2 | 262.2 | 260.9 | 260.8 |
| 51 | 262.6 | 263.0 | 264.5 | 266.2 | 266.9 | | 268.0 | 270.5 | 272.4 | 271.7 | 268.9 | 266.3 | 264.5 | 262.8 | 261.3 | 260.7 | 261.2 |
| 52 | 262.5 | 262.4 | 263.3 | 264.7 | 265.4 | 265.5 | 266.6 | 268.9 | 270.6 | 269.8 | 267.3 | 264.7 | 262.8 | 261.2 | 260.0 | 260.0 | 261.0 |
| 53 | 262.1 | 261.4 | 261.7 | 262.8 | 263.5 | 263.9 | 264.9 | 266.9 | 268.3 | 267.6 | 265.3 | 262.8 | 260.7 | 259.1 | 258.3 | 258.9 | 260.4 |
| 54 | 261.3 | 260.1 | 259.8 | 260.5 | 261.3 | 261.9 | 263.0 | 264.6 | 265.7 | 265.1 | 262.9 | 260.5 | 258.4 | 256.9 | 256.3 | 257.4 | 259.3 |
| 55 | 260.3 | 258.5 | 257.6 | 257.9 | 258.8 | 259.7 | 260.8 | 262.1 | 262.9 | 262.2 | 260.4 | 258.1 | 255.9 | 254.4 | 254.1 | 255.5 | 257.7 |
| 56 | 258.9 | 256.7 | 255.1 | 255.0 | 256.0 | 257.2 | 258.4 | 259.4 | 259.8 | 259.2 | 257.6 | 255.5 | 253.3 | 251.8 | 251.7 | 253.4 | 255.7 |
| 57 | 257.3 | 254.6 | 252.4 | 252.0 | 253.0 | 254.6 | 255.9 | 256.6 | 256.6 | 256.0 | 254.7 | 252.8 | 250.6 | 249.1 | 249.2 | 251.0 | 253.4 |
| 58 | 255.5 | 252.4 | 249.7 | 248.8 | 249.9 | 251.9 | 253.3 | 253.7 | 253.4 | 252.8 | 251.7 | 250.0 | 247.9 | 246.5 | 246.7 | 248.6 | 250.9 |
| 59 | 253.5 | 250.1 | 246.8 | 245.6 | 246.7 | 249.0 | 250.6 | 250.8 | 250.1 | 249.5 | 248.7 | 247.3 | 245.2 | 243.9 | 244.2 | 246.0 | 248.1 |
| 60 | 251.3 | 247.6 | 243.9 | 242.3 | 243.5 | 246.2 | 248.0 | 247.8 | 246.9 | 246.2 | 245.8 | 244.5 | 242.6 | 241.3 | 241.7 | 243.4 | 245.2 |
| 61 | 248.9 | 245.1 | 241.0 | 239.0 | 240.2 | 243.3 | 245.3 | 244.9 | 243.7 | 243.1 | 242.9 | 241.9 | 240.1 | 238.9 | 239.4 | 240.9 | 242.3 |
| 62 | 246.5 | 242.6 | 238.2 | 235.8 | 237.0 | 240.4 | 242.6 | 242.1 | 240.5 | 239.9 | 240.1 | 239.4 | 237.7 | 236.7 | 237.1 | 238.4 | 239.4 |
| 63 | 243.9 | 240.0 | 235.3 | 232.7 | 233.9 | 237.5 | 239.9 | 239.2 | 237.4 | 236.9 | 237.3 | 236.9 | 235.5 | 234.6 | 235.1 | 236.1 | 236.6 |
| 64 | 241.2 | 237.5 | 232.6 | 229.6 | 230.8 | 234.7 | 237.2 | 236.4 | 234.4 | 234.0 | 234.2 | 234.6 | 233.4 | 232.6 | 233.1 | 233.9 | 233.9 |
| 65 | 238.4 | 234.9 | 229.9 | 226.7 | 227.8 | 231.8 | 234.5 | 233.6 | 231.5 | 231.1 | 232.2 | 232.4 | 231.3 | 230.8 | 231.4 | 231.8 | 231.3 |
| 66 | 235.6 | 232.3 | 227.4 | 223.9 | 224.9 | 229.1 | 231.8 | 230.8 | 228.6 | 228.3 | 229.7 | 230.2 | 229.5 | 229.1 | 229.8 | 229.9 | 229.0 |
| 67 | 232.7 | 229.7 | 224.8 | 221.3 | 222.1 | 226.3 | 229.0 | 227.9 | 225.7 | 225.6 | 227.3 | 228.1 | 227.6 | 227.6 | 228.3 | 228.2 | 226.7 |
| 68 | 229.7 | 227.1 | 222.4 | 218.8 | 219.5 | 223.5 | 226.2 | 225.0 | 222.7 | 222.9 | 224.9 | 226.0 | 225.9 | 226.1 | 226.9 | 226.6 | 224.7 |
| 69 | 226.6 | 224.4 | 220.0 | 216.4 | 216.9 | 220.7 | 223.2 | 222.0 | 219.8 | 220.2 | 222.4 | 223.9 | 224.1 | 224.6 | 225.6 | 225.1 | 222.8 |
| 70 | 223.5 | 221.7 | 217.6 | 214.1 | 214.4 | 217.9 | 220.1 | 218.8 | 216.8 | 217.4 | 220.0 | 221.8 | 222.3 | 223.2 | 224.3 | 223.7 | 221.1 |
| 71 | 220.4 | 219.0 | 215.2 | 211.9 | 212.1 | 215.1 | 216.9 | 215.6 | 213.8 | 214.7 | 217.5 | 219.6 | 220.5 | 221.7 | 223.1 | 222.3 | 219.4 |
| 72 | 217.3 | 216.2 | 212.9 | 209.8 | 209.8 | 212.3 | 213.7 | 212.2 | 210.7 | 211.9 | 214.9 | 217.3 | 218.5 | 220.2 | 221.7 | 220.9 | 217.9 |
| 73 | 214.2 | 213.4 | 210.5 | 207.7 | 207.5 | 209.5 | 210.3 | 208.9 | 207.7 | 209.1 | 212.3 | 214.9 | 216.5 | 218.5 | 220.3 | 219.5 | 216.4 |
| 74 | 211.1 | 210.5 | 208.2 | 205.8 | 205.4 | 206.7 | 207.0 | 205.6 | 204.7 | 206.4 | 209.7 | 212.4 | 214.3 | 216.7 | 218.8 | 218.0 | 214.9 |
| 75 | 208.2 | 207.8 | 205.9 | 203.9 | 203.4 | 204.1 | 203.8 | 202.4 | 201.9 | 203.7 | 207.0 | 209.8 | 212.0 | 214.8 | 217.1 | 216.5 | 213.5 |
| 76 | 205.5 | 205.2 | 203.8 | 202.1 | 201.5 | 201.6 | 200.9 | 199.6 | 199.4 | 201.6 | 204.7 | 207.3 | 209.7 | 212.9 | 215.4 | 215.0 | 212.0 |
| 77 | 203.1 | 202.9 | 201.7 | 200.4 | 199.8 | 199.4 | 198.5 | 197.3 | 197.5 | 199.7 | 202.6 | 204.9 | 207.4 | 210.8 | 213.7 | 213.4 | 210.6 |
| 78 | 201.2 | 200.9 | 200.0 | 198.9 | 198.3 | 197.8 | 196.7 | 195.8 | 196.4 | 198.6 | 201.0 | 202.9 | 205.2 | 208.9 | 212.1 | 212.0 | 209.3 |
| 79 | 200.0 | 199.6 | 198.7 | 197.7 | 197.2 | 196.8 | 196.0 | 195.6 | 196.5 | 198.5 | 200.2 | 201.3 | 203.3 | 207.1 | 210.6 | 210.8 | 208.1 |
| 80 | 199.6 | 199.1 | 198.0 | 196.9 | 196.6 | 196.8 | 196.8 | 197.1 | 198.3 | 199.9 | 200.6 | 200.6 | 202.0 | 205.8 | 209.6 | 210.0 | 207.3 |

16

ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 213.3 | 217.4 | 219.9 | 218.6 | 214.7 | 210.2 | 206.3 | 203.4 | 202.0 | 202.9 | 205.9 | 210.0 | 214.4 | 218.5 | 222.0 | 224.5 | 225.. |
| 19 | 210.6 | 215.7 | 219.1 | 218.5 | 214.9 | 210.7 | 207.3 | 204.8 | 203.7 | 204.6 | 207.4 | 211.1 | 214.9 | 218.3 | 221.3 | 223.4 | 224.6 |
| 20 | 208.6 | 214.2 | 218.4 | 218.4 | 215.5 | 212.0 | 209.1 | 206.9 | 205.9 | 206.9 | 209.4 | 212.6 | 215.5 | 218.2 | 220.8 | 222.8 | 224.0 |
| 21 | 207.2 | 213.1 | 217.7 | 218.4 | 216.3 | 213.7 | 211.3 | 209.3 | 208.5 | 209.4 | 211.8 | 214.3 | 216.3 | 218.3 | 220.5 | 222.6 | 223.9 |
| 22 | 206.2 | 212.1 | 217.0 | 218.4 | 217.3 | 215.6 | 213.7 | 212.0 | 211.2 | 212.2 | 214.3 | 216.1 | 217.2 | 218.5 | 220.4 | 222.5 | 223.9 |
| 23 | 205.6 | 211.3 | 216.4 | 218.4 | 218.3 | 217.5 | 216.3 | 214.8 | 214.0 | 215.0 | 216.8 | 218.0 | 218.3 | 218.9 | 220.5 | 222.5 | 223.9 |
| 24 | 205.3 | 210.8 | 215.8 | 218.5 | 219.4 | 219.5 | 218.9 | 217.6 | 216.9 | 217.8 | 219.3 | 220.0 | 219.5 | 219.5 | 220.8 | 222.6 | 223.9 |
| 25 | 205.4 | 210.4 | 215.4 | 218.6 | 220.4 | 221.4 | 221.4 | 220.4 | 219.8 | 220.6 | 221.8 | 221.9 | 220.9 | 220.4 | 221.3 | 222.8 | 223.9 |
| 26 | 205.7 | 210.3 | 215.1 | 218.8 | 221.4 | 223.3 | 223.8 | 223.1 | 222.6 | 223.3 | 224.2 | 223.9 | 222.5 | 221.6 | 222.0 | 223.1 | 224.0 |
| 27 | 206.3 | 210.4 | 215.0 | 219.1 | 222.5 | 225.0 | 226.1 | 225.8 | 225.5 | 225.9 | 226.5 | 225.9 | 224.3 | 223.0 | 222.9 | 223.6 | 224.1 |
| 28 | 207.2 | 210.8 | 215.2 | 219.6 | 223.7 | 226.8 | 228.3 | 228.4 | 228.3 | 228.6 | 228.8 | 227.9 | 226.2 | 224.7 | 224.2 | 224.2 | 224.3 |
| 29 | 208.3 | 211.4 | 215.6 | 220.4 | 224.9 | 228.4 | 230.4 | 231.0 | 231.0 | 231.2 | 231.0 | 230.0 | 228.4 | 226.7 | 225.6 | 225.0 | 224.6 |
| 30 | 209.7 | 212.3 | 216.4 | 221.3 | 226.2 | 230.1 | 232.5 | 233.5 | 233.8 | 233.7 | 233.3 | 232.2 | 230.7 | 229.0 | 227.4 | 226.1 | 225.2 |
| 31 | 211.3 | 213.5 | 217.4 | 222.5 | 227.7 | 231.9 | 234.6 | 236.1 | 236.6 | 236.4 | 235.6 | 234.5 | 233.2 | 231.5 | 229.4 | 227.4 | 226.0 |
| 32 | 213.1 | 214.9 | 218.7 | 224.0 | 229.4 | 233.7 | 236.7 | 238.7 | 239.4 | 239.0 | 237.9 | 236.9 | 236.0 | 234.3 | 231.7 | 229.0 | 227.1 |
| 33 | 215.2 | 216.7 | 220.3 | 225.7 | 231.2 | 235.6 | 238.9 | 241.3 | 242.3 | 241.7 | 240.3 | 239.5 | 238.8 | 237.2 | 234.2 | 230.9 | 228.5 |
| 34 | 217.5 | 218.7 | 222.2 | 227.7 | 233.3 | 237.7 | 241.1 | 243.9 | 245.2 | 244.4 | 242.9 | 242.1 | 241.8 | 240.3 | 237.0 | 233.0 | 230.2 |
| 35 | 219.9 | 220.9 | 224.3 | 229.9 | 235.5 | 239.8 | 243.4 | 246.6 | 248.0 | 247.2 | 245.5 | 244.8 | 244.9 | 243.6 | 239.9 | 235.5 | 232.2 |
| 36 | 222.6 | 223.4 | 226.7 | 232.3 | 237.9 | 242.1 | 245.8 | 249.3 | 250.9 | 250.0 | 248.1 | 247.6 | 248.1 | 246.9 | 243.0 | 238.1 | 234.6 |
| 37 | 225.4 | 226.0 | 229.4 | 234.9 | 240.4 | 244.6 | 248.3 | 252.0 | 253.8 | 252.8 | 250.8 | 250.5 | 251.3 | 250.3 | 246.3 | 241.0 | 237.2 |
| 38 | 228.3 | 228.8 | 232.1 | 237.7 | 243.0 | 247.1 | 250.9 | 254.7 | 256.7 | 255.6 | 253.6 | 253.3 | 254.4 | 253.6 | 249.5 | 244.1 | 240.1 |
| 39 | 231.3 | 231.8 | 235.0 | 240.5 | 245.8 | 249.7 | 253.4 | 257.4 | 259.4 | 258.3 | 256.3 | 256.1 | 257.4 | 256.9 | 252.8 | 247.3 | 243.2 |
| 40 | 234.4 | 234.8 | 237.9 | 243.4 | 248.5 | 252.3 | 256.0 | 259.9 | 262.1 | 261.0 | 258.9 | 258.8 | 260.3 | 260.0 | 256.0 | 250.5 | 246.4 |
| 41 | 237.4 | 237.8 | 240.9 | 246.2 | 251.2 | 254.8 | 258.4 | 262.4 | 264.6 | 263.5 | 261.4 | 261.4 | 263.0 | 262.9 | 259.1 | 253.7 | 249.7 |
| 42 | 240.5 | 240.8 | 243.8 | 248.9 | 253.8 | 257.3 | 260.8 | 264.7 | 266.8 | 265.7 | 263.7 | 263.7 | 265.4 | 265.5 | 262.0 | 256.8 | 252.9 |
| 43 | 243.5 | 243.6 | 246.5 | 251.5 | 256.3 | 259.6 | 263.0 | 266.7 | 268.8 | 267.7 | 265.7 | 265.8 | 267.5 | 267.8 | 264.6 | 259.7 | 256.1 |
| 44 | 246.4 | 246.4 | 249.0 | 253.9 | 258.5 | 261.7 | 264.9 | 268.5 | 270.4 | 269.4 | 267.5 | 267.5 | 269.3 | 269.7 | 266.8 | 262.4 | 259.0 |
| 45 | 249.1 | 248.9 | 251.3 | 255.9 | 260.4 | 263.5 | 266.5 | 269.9 | 271.7 | 270.7 | 268.8 | 268.9 | 270.6 | 271.1 | 268.6 | 264.7 | 261.6 |
| 46 | 251.6 | 251.1 | 253.2 | 257.6 | 262.0 | 265.0 | 267.8 | 270.9 | 272.6 | 271.6 | 269.8 | 269.8 | 271.5 | 272.1 | 270.0 | 266.5 | 263.9 |
| 47 | 253.9 | 253.1 | 254.8 | 258.9 | 263.1 | 266.1 | 268.7 | 271.5 | 273.0 | 272.1 | 270.3 | 270.4 | 272.0 | 272.7 | 270.9 | 267.9 | 265.7 |
| 48 | 255.9 | 254.7 | 255.9 | 259.8 | 263.9 | 266.8 | 269.2 | 271.7 | 273.0 | 272.0 | 270.4 | 270.4 | 272.0 | 272.8 | 271.3 | 268.8 | 267.0 |
| 49 | 257.6 | 255.9 | 256.7 | 260.1 | 264.1 | 267.0 | 269.2 | 271.4 | 272.5 | 271.5 | 270.0 | 270.1 | 271.6 | 272.4 | 271.2 | 269.2 | 267.7 |
| 50 | 258.9 | 256.8 | 257.0 | 260.1 | 263.9 | 266.7 | 268.8 | 270.7 | 271.5 | 270.6 | 269.2 | 269.3 | 270.7 | 271.5 | 270.6 | 269.0 | 267.8 |
| 51 | 259.9 | 257.2 | 256.8 | 259.5 | 263.2 | 266.0 | 267.9 | 269.5 | 270.1 | 269.2 | 267.9 | 268.1 | 269.4 | 270.3 | 269.6 | 268.3 | 267.4 |
| 52 | 260.5 | 257.3 | 256.3 | 258.6 | 262.1 | 264.8 | 266.6 | 267.9 | 268.3 | 267.4 | 266.3 | 266.5 | 267.8 | 268.6 | 268.1 | 267.1 | 266.5 |
| 53 | 260.8 | 257.0 | 255.4 | 257.2 | 260.5 | 263.3 | 265.0 | 266.0 | 266.1 | 265.2 | 264.3 | 264.6 | 265.9 | 266.7 | 266.3 | 265.5 | 265.1 |
| 54 | 260.7 | 256.4 | 254.2 | 255.5 | 258.6 | 261.4 | 262.9 | 263.8 | 263.5 | 262.7 | 262.0 | 262.5 | 263.7 | 264.4 | 264.1 | 263.5 | 263.2 |
| 55 | 260.2 | 255.5 | 252.7 | 253.5 | 256.4 | 259.1 | 260.6 | 261.0 | 260.7 | 260.0 | 259.5 | 260.1 | 261.3 | 261.9 | 261.7 | 261.2 | 261.0 |
| 56 | 259.4 | 254.3 | 250.9 | 251.3 | 254.0 | 256.7 | 258.0 | 258.2 | 257.7 | 257.0 | 256.9 | 257.6 | 258.7 | 259.3 | 259.1 | 258.7 | 258.6 |
| 57 | 258.4 | 252.9 | 249.0 | 248.8 | 251.3 | 254.0 | 255.3 | 255.2 | 254.4 | 253.9 | 254.1 | 255.0 | 256.0 | 256.5 | 256.4 | 256.0 | 255.9 |
| 58 | 257.0 | 251.4 | 247.0 | 246.3 | 248.5 | 251.2 | 252.4 | 252.0 | 251.1 | 250.7 | 251.3 | 252.3 | 253.3 | 253.7 | 253.6 | 253.3 | 253.2 |
| 59 | 255.5 | 249.7 | 245.0 | 243.8 | 245.7 | 248.3 | 249.4 | 248.7 | 247.7 | 247.5 | 248.4 | 249.7 | 250.5 | 250.8 | 250.8 | 250.6 | 250.4 |
| 60 | 253.7 | 248.0 | 242.9 | 241.2 | 242.8 | 245.4 | 246.4 | 245.4 | 244.2 | 244.3 | 245.6 | 247.0 | 247.7 | 247.9 | 248.0 | 247.9 | 247.7 |
| 61 | 251.8 | 246.2 | 240.9 | 238.6 | 239.9 | 242.5 | 243.4 | 242.1 | 240.7 | 241.0 | 242.8 | 244.4 | 245.0 | 245.1 | 245.3 | 245.3 | 245.0 |
| 62 | 249.8 | 244.4 | 238.9 | 236.2 | 237.1 | 239.6 | 240.4 | 238.8 | 237.3 | 237.9 | 240.1 | 241.8 | 242.2 | 242.3 | 242.6 | 242.8 | 242.5 |
| 63 | 247.7 | 242.7 | 237.0 | 233.8 | 234.4 | 236.8 | 237.4 | 235.6 | 233.9 | 234.8 | 237.4 | 239.3 | 239.6 | 239.6 | 240.1 | 240.4 | 240.0 |
| 64 | 245.6 | 240.9 | 235.1 | 231.5 | 231.8 | 234.0 | 234.5 | 232.3 | 230.5 | 231.7 | 234.8 | 236.8 | 237.0 | 236.9 | 237.7 | 238.2 | 237.7 |
| 65 | 243.5 | 239.2 | 233.4 | 229.3 | 229.2 | 231.3 | 231.6 | 229.2 | 227.3 | 228.7 | 232.2 | 234.3 | 234.4 | 234.4 | 235.3 | 236.0 | 235.6 |
| 66 | 241.3 | 237.5 | 231.7 | 227.3 | 226.8 | 228.7 | 228.8 | 226.1 | 224.1 | 225.8 | 229.6 | 231.9 | 231.8 | 231.8 | 233.1 | 234.0 | 233.5 |
| 67 | 239.2 | 235.9 | 230.1 | 225.3 | 224.4 | 226.1 | 226.0 | 223.0 | 221.0 | 222.9 | 227.1 | 229.5 | 29.3 | 229.3 | 230.8 | 232.0 | 231.5 |
| 68 | 237.1 | 234.2 | 228.6 | 223.5 | 222.2 | 223.5 | 223.2 | 220.0 | 218.0 | 220.1 | 224.5 | 227.0 | 226.8 | 227.0 | 228.7 | 230.0 | 229.5 |
| 69 | 235.1 | 232.6 | 227.1 | 221.7 | 219.9 | 220.9 | 220.3 | 217.1 | 215.1 | 217.3 | 221.8 | 224.4 | 224.3 | 224.6 | 226.5 | 227.9 | 227.4 |
| 70 | 233.2 | 231.0 | 225.6 | 219.9 | 217.8 | 218.3 | 217.5 | 214.2 | 212.2 | 214.5 | 219.1 | 221.7 | 221.7 | 222.2 | 224.2 | 225.7 | 225.2 |
| 71 | 231.4 | 229.4 | 224.1 | 218.2 | 215.6 | 215.7 | 214.6 | 211.4 | 209.5 | 211.8 | 216.3 | 218.9 | 219.1 | 219.7 | 221.9 | 223.4 | 222.9 |
| 72 | 229.7 | 227.8 | 222.5 | 216.5 | 213.5 | 213.1 | 211.8 | 208.6 | 206.9 | 209.1 | 213.4 | 216.0 | 216.4 | 217.2 | 219.5 | 220.9 | 220.3 |
| 73 | 228.1 | 226.2 | 221.0 | 214.9 | 211.4 | 210.4 | 208.9 | 206.0 | 204.5 | 206.5 | 210.4 | 212.9 | 213.6 | 214.7 | 216.9 | 218.1 | 217.4 |
| 74 | 226.7 | 224.6 | 219.4 | 213.2 | 209.3 | 207.8 | 206.1 | 203.5 | 202.3 | 204.1 | 207.5 | 209.9 | 210.8 | 212.1 | 214.2 | 215.1 | 214.3 |
| 75 | 225.5 | 223.2 | 217.9 | 211.6 | 207.3 | 205.3 | 203.5 | 201.3 | 200.3 | 201.9 | 204.7 | 206.8 | 207.9 | 209.4 | 211.3 | 211.9 | 211.0 |
| 76 | 224.5 | 221.8 | 216.4 | 210.1 | 205.5 | 202.9 | 201.2 | 199.5 | 198.9 | 200.0 | 202.2 | 203.9 | 205.1 | 206.7 | 208.3 | 208.5 | 207.4 |
| 77 | 223.9 | 220.8 | 215.2 | 208.9 | 203.9 | 200.9 | 199.3 | 198.2 | 197.9 | 198.7 | 200.0 | 201.2 | 202.3 | 203.9 | 205.2 | 205.1 | 203.9 |
| 78 | 223.6 | 220.1 | 214.4 | 208.0 | 202.7 | 199.5 | 198.0 | 197.6 | 197.8 | 198.2 | 198.6 | 199.0 | 199.8 | 201.1 | 202.1 | 201.8 | 200.5 |
| 79 | 223.8 | 220.1 | 214.2 | 207.6 | 202.1 | 198.9 | 197.8 | 198.1 | 198.7 | 198.9 | 198.3 | 197.5 | 197.5 | 198.4 | 199.2 | 198.7 | 197.4 |
| 80 | 224.6 | 221.1 | 215.0 | 208.1 | 202.5 | 199.5 | 199.0 | 200.0 | 201.2 | 201.1 | 199.5 | 197.2 | 195.7 | 195.8 | 196.5 | 196.3 | 195.1 |

17

ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 199.9 | 206.9 | 214.2 | 217.6 | 215.8 | 211.0 | 206.5 | 203.8 | 202.9 | 203.4 | 205.5 | 209.4 | 214.4 | 219.4 | 223.2 | 225.8 | 227.3 |
| 19 | 194.8 | 203.4 | 212.6 | 217.2 | 216.0 | 211.7 | 207.7 | 205.5 | 204.9 | 205.6 | 207.7 | 211.3 | 215.6 | 219.6 | 222.7 | 224.9 | 226.3 |
| 20 | 191.6 | 200.9 | 211.0 | 216.8 | 216.4 | 212.9 | 209.5 | 207.6 | 207.2 | 208.1 | 210.1 | 213.3 | 216.9 | 220.0 | 222.4 | 224.4 | 225.8 |
| 21 | 189.9 | 199.1 | 209.6 | 216.2 | 217.0 | 214.4 | 211.6 | 210.0 | 209.8 | 210.7 | 212.7 | 215.4 | 218.2 | 220.5 | 222.4 | 224.2 | 225.7 |
| 22 | 189.2 | 197.9 | 208.2 | 215.5 | 217.7 | 216.2 | 213.9 | 212.6 | 212.5 | 213.5 | 215.3 | 217.5 | 219.5 | 221.2 | 222.7 | 224.3 | 225.9 |
| 23 | 189.4 | 197.2 | 207.0 | 214.8 | 218.2 | 217.9 | 216.3 | 215.2 | 215.3 | 216.3 | 217.8 | 219.5 | 220.9 | 222.0 | 223.2 | 224.7 | 226.3 |
| 24 | 190.2 | 197.1 | 206.1 | 214.1 | 218.7 | 219.6 | 218.7 | 217.9 | 218.1 | 219.0 | 220.3 | 221.5 | 222.4 | 223.1 | 224.0 | 225.4 | 227.0 |
| 25 | 191.7 | 197.3 | 205.4 | 213.5 | 219.1 | 221.2 | 221.1 | 220.6 | 220.9 | 221.7 | 222.7 | 223.5 | 223.9 | 224.3 | 225.0 | 226.3 | 227.8 |
| 26 | 193.5 | 197.9 | 204.9 | 213.0 | 219.5 | 222.8 | 223.5 | 223.4 | 223.6 | 224.3 | 225.0 | 225.4 | 225.6 | 225.7 | 226.3 | 227.4 | 228.8 |
| 27 | 195.7 | 198.9 | 204.8 | 212.7 | 219.9 | 224.2 | 225.7 | 226.0 | 226.4 | 226.8 | 227.2 | 227.3 | 227.3 | 227.4 | 227.8 | 228.8 | 230.0 |
| 28 | 198.2 | 200.2 | 205.1 | 212.6 | 220.3 | 225.6 | 228.0 | 228.7 | 229.1 | 229.3 | 229.4 | 229.3 | 229.2 | 229.3 | 229.6 | 230.4 | 231.4 |
| 29 | 200.9 | 201.8 | 205.6 | 212.7 | 220.9 | 227.0 | 230.1 | 231.3 | 231.7 | 231.8 | 231.5 | 231.3 | 231.2 | 231.3 | 231.6 | 232.2 | 233.0 |
| 30 | 203.8 | 203.6 | 206.5 | 213.2 | 221.6 | 228.4 | 232.3 | 233.9 | 234.3 | 234.2 | 233.7 | 233.4 | 233.4 | 233.6 | 233.9 | 234.2 | 234.8 |
| 31 | 206.9 | 205.8 | 207.8 | 214.0 | 222.5 | 229.9 | 234.4 | 236.4 | 236.9 | 236.5 | 235.9 | 235.6 | 235.8 | 236.1 | 236.3 | 236.5 | 236.8 |
| 32 | 210.0 | 208.1 | 209.3 | 215.1 | 223.6 | 231.5 | 236.6 | 238.9 | 239.5 | 238.9 | 238.1 | 237.9 | 238.3 | 238.3 | 239.0 | 238.9 | 238.9 |
| 33 | 213.3 | 210.7 | 211.2 | 216.5 | 225.0 | 233.2 | 238.7 | 241.4 | 242.0 | 241.3 | 240.5 | 240.3 | 241.0 | 241.7 | 241.9 | 241.6 | 241.3 |
| 34 | 216.6 | 213.5 | 213.4 | 218.2 | 226.6 | 235.0 | 241.0 | 243.9 | 244.5 | 243.8 | 242.9 | 242.8 | 243.8 | 244.7 | 244.9 | 244.4 | 243.9 |
| 35 | 220.0 | 216.4 | 215.8 | 220.2 | 228.4 | 237.0 | 243.2 | 246.4 | 247.0 | 246.2 | 245.3 | 245.5 | 246.7 | 247.8 | 248.0 | 247.3 | 246.6 |
| 36 | 223.4 | 219.5 | 218.5 | 222.5 | 230.5 | 239.1 | 245.5 | 248.8 | 249.4 | 248.6 | 247.8 | 248.2 | 249.7 | 251.0 | 251.2 | 250.4 | 249.4 |
| 37 | 226.8 | 222.8 | 221.4 | 225.1 | 232.8 | 241.3 | 247.9 | 251.2 | 251.9 | 251.0 | 250.4 | 251.0 | 252.7 | 254.2 | 254.4 | 253.5 | 252.4 |
| 38 | 230.2 | 226.1 | 224.5 | 227.8 | 235.2 | 243.7 | 250.2 | 253.6 | 254.2 | 253.4 | 253.0 | 253.8 | 255.7 | 257.3 | 257.6 | 256.7 | 255.4 |
| 39 | 233.6 | 229.4 | 227.7 | 230.7 | 237.8 | 246.1 | 252.6 | 255.9 | 256.5 | 255.8 | 255.5 | 256.6 | 258.7 | 260.4 | 260.8 | 259.8 | 258.5 |
| 40 | 236.9 | 232.8 | 230.9 | 233.7 | 240.5 | 248.5 | 254.9 | 258.1 | 258.6 | 258.0 | 258.0 | 259.3 | 261.5 | 263.4 | 263.8 | 262.9 | 261.6 |
| 41 | 240.1 | 236.1 | 234.2 | 236.7 | 243.2 | 251.0 | 257.1 | 260.2 | 260.7 | 260.2 | 260.3 | 261.8 | 264.2 | 266.2 | 266.7 | 265.8 | 264.5 |
| 42 | 243.2 | 239.4 | 237.5 | 239.7 | 245.8 | 253.3 | 259.3 | 262.1 | 262.5 | 262.2 | 262.5 | 264.2 | 266.7 | 268.7 | 269.4 | 268.6 | 267.4 |
| 43 | 246.1 | 242.6 | 240.7 | 242.6 | 248.4 | 255.5 | 261.2 | 263.9 | 264.2 | 263.9 | 264.5 | 266.3 | 268.8 | 270.9 | 271.7 | 271.2 | 270.1 |
| 44 | 248.9 | 245.6 | 243.7 | 245.4 | 250.7 | 257.5 | 263.0 | 265.5 | 265.7 | 265.4 | 266.2 | 268.2 | 270.7 | 272.8 | 273.8 | 273.5 | 272.6 |
| 45 | 251.4 | 248.4 | 246.5 | 247.9 | 252.8 | 259.3 | 264.5 | 266.8 | 266.9 | 266.7 | 267.6 | 269.6 | 272.2 | 274.3 | 275.5 | 275.4 | 274.8 |
| 46 | 253.8 | 251.0 | 249.1 | 250.1 | 254.6 | 260.7 | 265.8 | 267.9 | 267.8 | 267.6 | 268.6 | 270.7 | 273.2 | 275.4 | 276.7 | 277.0 | 276.6 |
| 47 | 255.8 | 253.3 | 251.4 | 252.0 | 256.0 | 261.8 | 266.6 | 268.6 | 268.4 | 268.1 | 269.2 | 271.4 | 273.9 | 276.0 | 277.5 | 278.1 | 278.1 |
| 48 | 257.6 | 255.4 | 253.3 | 253.6 | 257.0 | 262.5 | 267.2 | 269.0 | 268.6 | 268.3 | 269.4 | 271.6 | 274.0 | 276.2 | 277.9 | 278.9 | 279.2 |
| 49 | 259.1 | 257.0 | 254.9 | 254.7 | 257.6 | 262.8 | 267.3 | 269.0 | 268.5 | 268.1 | 269.2 | 271.4 | 273.7 | 275.9 | 277.8 | 279.2 | 279.8 |
| 50 | 260.2 | 258.4 | 256.1 | 255.4 | 257.8 | 262.6 | 267.0 | 268.6 | 268.0 | 267.5 | 268.6 | 270.7 | 273.0 | 275.2 | 277.3 | 279.0 | 279.9 |
| 51 | 261.0 | 259.4 | 257.0 | 255.7 | 257.6 | 262.1 | 266.3 | 267.9 | 267.1 | 266.6 | 267.6 | 269.6 | 271.8 | 274.0 | 276.3 | 278.4 | 279.6 |
| 52 | 261.5 | 260.0 | 257.4 | 255.6 | 256.9 | 261.1 | 265.2 | 266.7 | 265.8 | 265.2 | 266.2 | 268.1 | 270.3 | 272.5 | 274.9 | 277.3 | 278.9 |
| 53 | 261.5 | 260.3 | 257.5 | 255.2 | 255.9 | 259.7 | 263.8 | 265.1 | 264.2 | 263.5 | 264.4 | 266.3 | 268.3 | 270.5 | 273.2 | 275.8 | 277.7 |
| 54 | 261.3 | 260.2 | 257.3 | 254.4 | 254.5 | 258.0 | 261.9 | 263.2 | 262.2 | 261.5 | 262.4 | 264.2 | 266.1 | 268.3 | 271.1 | 274.0 | 276.1 |
| 55 | 260.7 | 259.8 | 256.7 | 253.4 | 252.9 | 256.0 | 259.7 | 260.9 | 259.9 | 259.2 | 260.1 | 261.8 | 263.6 | 265.7 | 268.7 | 271.9 | 274.1 |
| 56 | 259.7 | 259.0 | 255.9 | 252.1 | 251.1 | 253.8 | 257.2 | 258.3 | 257.2 | 256.6 | 257.5 | 259.2 | 260.9 | 263.0 | 266.0 | 269.4 | 271.9 |
| 57 | 258.5 | 258.0 | 254.8 | 250.6 | 249.1 | 251.3 | 254.4 | 255.3 | 254.3 | 253.8 | 254.9 | 256.5 | 258.0 | 260.2 | 263.2 | 266.7 | 269.3 |
| 58 | 257.1 | 256.8 | 253.6 | 249.1 | 247.1 | 248.8 | 251.5 | 252.2 | 251.1 | 250.8 | 252.0 | 253.6 | 254.9 | 256.9 | 260.1 | 263.8 | 266.5 |
| 59 | 255.4 | 255.4 | 252.2 | 247.4 | 244.9 | 246.1 | 248.3 | 248.7 | 247.8 | 247.7 | 249.2 | 250.7 | 251.8 | 253.6 | 257.0 | 260.8 | 263.5 |
| 60 | 253.5 | 253.8 | 250.7 | 245.7 | 242.8 | 243.4 | 245.1 | 245.1 | 244.2 | 244.5 | 246.2 | 247.7 | 248.6 | 250.3 | 253.8 | 257.7 | 260.3 |
| 61 | 251.5 | 252.0 | 249.1 | 244.0 | 240.7 | 240.7 | 241.7 | 241.4 | 240.6 | 241.3 | 243.2 | 244.7 | 245.4 | 247.0 | 250.5 | 254.4 | 257.0 |
| 62 | 249.4 | 250.2 | 247.4 | 242.3 | 238.6 | 238.0 | 238.3 | 237.5 | 236.8 | 237.9 | 240.2 | 241.7 | 242.1 | 243.6 | 247.1 | 251.1 | 253.7 |
| 63 | 247.2 | 248.3 | 245.7 | 240.6 | 236.6 | 235.4 | 234.9 | 233.6 | 233.0 | 234.6 | 237.2 | 238.6 | 238.9 | 240.2 | 243.8 | 247.8 | 250.2 |
| 64 | 245.1 | 246.3 | 244.0 | 238.9 | 234.7 | 232.7 | 231.4 | 229.7 | 229.2 | 231.2 | 234.2 | 235.6 | 235.6 | 236.9 | 240.4 | 244.4 | 246.7 |
| 65 | 242.9 | 244.3 | 242.3 | 237.3 | 232.8 | 230.2 | 228.0 | 225.8 | 225.4 | 227.9 | 231.2 | 232.6 | 232.4 | 233.5 | 237.1 | 241.0 | 243.1 |
| 66 | 240.9 | 242.4 | 240.5 | 235.6 | 230.9 | 227.6 | 224.6 | 222.0 | 221.7 | 224.6 | 228.2 | 229.5 | 229.1 | 230.2 | 233.8 | 237.6 | 239.5 |
| 67 | 238.9 | 240.5 | 238.7 | 233.9 | 229.0 | 225.0 | 221.3 | 218.2 | 218.1 | 221.3 | 225.2 | 226.4 | 225.8 | 226.8 | 230.4 | 234.1 | 235.8 |
| 68 | 237.1 | 238.6 | 236.9 | 232.2 | 227.0 | 222.5 | 218.0 | 214.6 | 214.5 | 218.1 | 222.1 | 223.3 | 222.6 | 223.5 | 227.0 | 230.6 | 232.1 |
| 69 | 235.5 | 236.8 | 235.1 | 230.4 | 225.0 | 219.9 | 214.8 | 211.2 | 211.2 | 214.9 | 219.0 | 220.1 | 219.2 | 220.1 | 223.6 | 227.0 | 228.2 |
| 70 | 234.0 | 235.0 | 233.2 | 228.5 | 222.9 | 217.3 | 211.7 | 207.9 | 208.0 | 211.9 | 215.9 | 216.8 | 215.9 | 216.8 | 220.2 | 223.3 | 224.2 |
| 71 | 232.8 | 233.4 | 231.3 | 226.5 | 220.7 | 214.6 | 208.7 | 204.8 | 205.0 | 208.9 | 212.7 | 213.4 | 212.5 | 213.4 | 216.6 | 219.5 | 220.1 |
| 72 | 231.7 | 231.8 | 229.4 | 224.4 | 218.3 | 211.9 | 205.9 | 202.1 | 202.3 | 206.1 | 209.6 | 210.0 | 209.0 | 209.9 | 213.0 | 215.5 | 215.8 |
| 73 | 230.9 | 230.4 | 227.4 | 222.2 | 215.8 | 209.3 | 203.2 | 199.6 | 199.9 | 203.4 | 206.4 | 206.6 | 205.6 | 206.4 | 209.3 | 211.4 | 211.3 |
| 74 | 230.3 | 229.1 | 225.5 | 219.9 | 213.3 | 206.6 | 200.8 | 197.4 | 197.9 | 201.0 | 203.4 | 203.2 | 202.1 | 202.9 | 205.4 | 207.0 | 206.7 |
| 75 | 229.9 | 227.9 | 223.7 | 217.6 | 210.8 | 204.1 | 198.6 | 195.7 | 196.3 | 198.9 | 200.5 | 199.9 | 198.7 | 199.4 | 201.4 | 202.5 | 201.9 |
| 76 | 229.6 | 226.9 | 222.0 | 215.5 | 208.5 | 201.9 | 196.8 | 194.5 | 195.2 | 197.2 | 198.0 | 196.8 | 195.4 | 195.8 | 197.2 | 197.8 | 196.9 |
| 77 | 229.5 | 226.1 | 220.6 | 213.7 | 206.5 | 200.0 | 195.5 | 193.9 | 194.7 | 196.1 | 195.9 | 194.0 | 192.3 | 192.2 | 193.0 | 192.8 | 191.7 |
| 78 | 229.6 | 225.5 | 219.6 | 212.5 | 205.2 | 198.8 | 194.9 | 193.9 | 195.0 | 195.7 | 194.5 | 191.8 | 189.6 | 188.8 | 188.6 | 187.8 | 186.4 |
| 79 | 229.6 | 225.2 | 219.2 | 212.2 | 204.8 | 198.6 | 195.1 | 194.9 | 196.1 | 196.3 | 194.1 | 190.4 | 187.3 | 185.4 | 184.1 | 182.5 | 181.0 |
| 80 | 229.6 | 225.3 | 219.7 | 213.2 | 206.0 | 199.8 | 196.6 | 196.9 | 198.5 | 198.3 | 195.0 | 190.1 | 185.6 | 182.2 | 179.5 | 177.3 | 175.6 |

18

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 189.4 | 197.3 | 207.6 | 215.5 | 217.0 | 213.1 | 208.1 | 205.1 | 204.2 | 204.5 | 205.8 | 209.0 | 214.3 | 220.3 | 225.3 | 228.6 | 230.4 |
| 19 | 182.4 | 192.3 | 205.0 | 214.8 | 217.2 | 213.8 | 209.3 | 206.9 | 206.5 | 207.2 | 208.7 | 211.7 | 216.3 | 221.2 | 225.4 | 228.4 | 230.3 |
| 20 | 178.3 | 188.8 | 202.7 | 213.9 | 217.7 | 215.0 | 210.9 | 208.9 | 209.0 | 210.0 | 211.6 | 214.3 | 218.1 | 222.1 | 225.6 | 228.3 | 230.4 |
| 21 | 176.3 | 186.7 | 200.7 | 213.0 | 218.1 | 216.5 | 212.9 | 211.1 | 211.5 | 212.8 | 214.3 | 216.6 | 219.8 | 223.1 | 226.0 | 228.5 | 230.7 |
| 22 | 176.0 | 185.6 | 199.2 | 212.0 | 218.4 | 217.9 | 215.0 | 213.5 | 214.1 | 215.5 | 216.9 | 218.8 | 221.4 | 224.1 | 226.6 | 229.0 | 231.1 |
| 23 | 176.8 | 185.4 | 198.1 | 210.9 | 218.5 | 219.3 | 217.1 | 215.9 | 216.6 | 218.0 | 219.3 | 220.9 | 223.0 | 225.2 | 227.4 | 229.4 | 231.8 |
| 24 | 178.6 | 185.9 | 197.4 | 210.0 | 218.4 | 220.6 | 219.3 | 218.4 | 219.1 | 220.5 | 221.6 | 222.9 | 224.6 | 226.5 | 228.4 | 230.6 | 232.6 |
| 25 | 181.1 | 187.1 | 197.2 | 209.1 | 218.2 | 221.7 | 221.4 | 220.9 | 221.6 | 222.8 | 223.8 | 224.8 | 226.2 | 227.8 | 229.7 | 231.7 | 233.6 |
| 26 | 184.3 | 188.9 | 197.5 | 208.4 | 217.9 | 222.7 | 223.5 | 223.4 | 224.0 | 225.0 | 225.8 | 226.6 | 227.8 | 229.3 | 231.2 | 233.1 | 234.8 |
| 27 | 187.9 | 191.2 | 198.1 | 208.0 | 217.6 | 223.6 | 225.5 | 225.8 | 226.3 | 227.1 | 227.8 | 228.4 | 229.4 | 231.0 | 232.9 | 234.8 | 236.2 |
| 28 | 191.9 | 193.9 | 199.2 | 207.8 | 217.4 | 224.4 | 227.5 | 228.2 | 228.6 | 229.1 | 229.7 | 230.2 | 231.2 | 232.8 | 234.8 | 236.6 | 237.8 |
| 29 | 196.1 | 196.9 | 200.6 | 208.0 | 217.3 | 225.2 | 229.4 | 230.7 | 230.8 | 231.1 | 231.6 | 232.1 | 233.1 | 234.8 | 236.9 | 238.7 | 239.6 |
| 30 | 200.5 | 200.2 | 202.5 | 208.5 | 217.4 | 226.0 | 231.4 | 233.0 | 233.0 | 233.0 | 233.5 | 234.1 | 235.1 | 236.9 | 239.3 | 241.0 | 241.6 |
| 31 | 205.0 | 203.8 | 204.6 | 209.3 | 217.7 | 227.0 | 233.4 | 235.4 | 235.2 | 235.0 | 235.4 | 236.1 | 237.2 | 239.3 | 241.8 | 243.4 | 243.8 |
| 32 | 209.5 | 207.6 | 207.1 | 210.6 | 218.4 | 228.2 | 235.3 | 237.8 | 237.4 | 237.0 | 237.4 | 238.2 | 239.4 | 241.7 | 244.4 | 246.0 | 246.1 |
| 33 | 214.1 | 211.4 | 209.9 | 212.1 | 219.4 | 229.5 | 237.4 | 240.1 | 239.5 | 239.0 | 239.5 | 240.4 | 241.8 | 244.3 | 247.2 | 248.8 | 248.6 |
| 34 | 218.5 | 215.4 | 212.9 | 214.1 | 220.8 | 231.0 | 239.5 | 242.5 | 241.7 | 241.0 | 241.6 | 242.7 | 244.3 | 247.0 | 250.1 | 251.7 | 251.2 |
| 35 | 222.9 | 219.5 | 216.1 | 216.3 | 222.5 | 232.8 | 241.6 | 244.8 | 243.9 | 243.1 | 243.8 | 245.1 | 246.8 | 249.7 | 253.1 | 254.6 | 253.9 |
| 36 | 227.1 | 223.5 | 219.5 | 218.9 | 224.5 | 234.8 | 243.9 | 247.1 | 246.1 | 245.2 | 246.0 | 247.6 | 249.5 | 252.6 | 256.1 | 257.6 | 256.8 |
| 37 | 231.2 | 227.5 | 223.0 | 221.8 | 226.9 | 237.0 | 246.1 | 249.4 | 248.3 | 247.4 | 248.4 | 250.1 | 252.1 | 255.4 | 259.0 | 260.6 | 259.7 |
| 38 | 235.1 | 231.4 | 226.6 | 224.9 | 229.5 | 239.4 | 248.5 | 251.6 | 250.4 | 249.6 | 250.7 | 252.6 | 254.8 | 258.2 | 262.0 | 263.6 | 262.6 |
| 39 | 238.8 | 235.2 | 230.3 | 228.1 | 232.3 | 241.9 | 250.8 | 253.8 | 252.6 | 251.8 | 253.1 | 255.1 | 257.5 | 261.0 | 264.9 | 266.5 | 265.5 |
| 40 | 242.3 | 238.9 | 234.0 | 231.5 | 235.3 | 244.5 | 253.1 | 255.9 | 254.6 | 253.9 | 255.4 | 257.6 | 260.1 | 263.6 | 267.6 | 269.4 | 268.4 |
| 41 | 245.7 | 242.4 | 237.6 | 235.0 | 238.4 | 247.2 | 255.4 | 257.9 | 256.6 | 256.0 | 257.6 | 260.0 | 262.5 | 266.1 | 270.2 | 272.0 | 271.2 |
| 42 | 248.8 | 245.8 | 241.1 | 238.4 | 241.6 | 249.8 | 257.5 | 259.8 | 258.5 | 258.0 | 259.7 | 262.2 | 264.8 | 268.5 | 272.5 | 274.5 | 273.8 |
| 43 | 251.6 | 248.9 | 244.4 | 241.7 | 244.6 | 252.4 | 259.5 | 261.6 | 260.2 | 259.9 | 261.7 | 264.2 | 266.9 | 270.5 | 274.6 | 276.8 | 276.3 |
| 44 | 254.3 | 251.8 | 247.6 | 244.9 | 247.6 | 254.8 | 261.4 | 263.1 | 261.8 | 261.5 | 263.5 | 266.1 | 268.7 | 272.3 | 276.5 | 278.8 | 278.6 |
| 45 | 256.7 | 254.5 | 250.5 | 247.9 | 250.3 | 256.9 | 262.9 | 264.4 | 263.1 | 263.0 | 265.0 | 267.6 | 270.2 | 273.8 | 278.0 | 280.5 | 280.6 |
| 46 | 258.9 | 256.9 | 253.2 | 250.6 | 252.7 | 258.8 | 264.3 | 265.5 | 264.2 | 264.2 | 266.2 | 268.8 | 271.4 | 275.0 | 279.2 | 281.9 | 282.3 |
| 47 | 260.9 | 259.1 | 255.5 | 252.9 | 254.7 | 260.2 | 265.2 | 266.3 | 265.0 | 265.0 | 267.1 | 269.7 | 272.2 | 275.7 | 280.0 | 283.0 | 283.6 |
| 48 | 262.6 | 261.0 | 257.5 | 254.9 | 256.3 | 261.3 | 265.9 | 266.7 | 265.5 | 265.6 | 267.6 | 270.1 | 272.7 | 276.1 | 280.4 | 283.6 | 284.6 |
| 49 | 264.0 | 262.6 | 259.2 | 256.4 | 257.4 | 261.9 | 266.1 | 266.9 | 265.7 | 265.8 | 267.8 | 270.2 | 272.7 | 276.1 | 280.5 | 283.9 | 285.3 |
| 50 | 265.1 | 263.9 | 260.5 | 257.5 | 258.0 | 262.1 | 265.9 | 66.6 | 265.5 | 265.6 | 267.5 | 269.9 | 272.3 | 275.7 | 280.2 | 283.9 | 285.5 |
| 51 | 265.9 | 264.8 | 261.5 | 258.1 | 258.2 | 261.8 | 265.4 | 266.0 | 264.9 | 265.0 | 266.8 | 269.1 | 271.4 | 274.9 | 279.4 | 283.4 | 285.4 |
| 52 | 266.4 | 265.5 | 262.1 | 258.4 | 257.8 | 261.0 | 264.4 | 265.0 | 264.0 | 264.0 | 265.7 | 267.9 | 270.2 | 273.6 | 278.4 | 282.6 | 284.8 |
| 53 | 266.5 | 265.8 | 262.4 | 258.2 | 257.1 | 259.8 | 263.0 | 263.7 | 262.6 | 262.6 | 264.2 | 266.3 | 268.6 | 272.1 | 276.9 | 281.4 | 283.8 |
| 54 | 266.3 | 265.8 | 262.3 | 257.7 | 256.0 | 258.2 | 261.2 | 261.9 | 260.9 | 260.8 | 262.3 | 264.3 | 266.6 | 270.1 | 275.1 | 279.8 | 282.5 |
| 55 | 265.8 | 265.5 | 261.9 | 256.8 | 254.6 | 256.3 | 259.1 | 259.8 | 258.9 | 258.7 | 260.1 | 262.0 | 264.3 | 267.9 | 273.0 | 277.9 | 280.7 |
| 56 | 264.9 | 264.8 | 261.2 | 255.8 | 252.9 | 254.1 | 256.6 | 257.3 | 256.4 | 256.3 | 257.6 | 259.4 | 261.7 | 265.4 | 270.6 | 275.7 | 278.7 |
| 57 | 263.7 | 263.8 | 260.2 | 254.5 | 251.0 | 251.7 | 253.9 | 254.5 | 253.7 | 253.6 | 254.8 | 256.5 | 258.8 | 262.6 | 268.0 | 273.2 | 276.2 |
| 58 | 262.1 | 262.5 | 259.0 | 253.0 | 249.1 | 250.2 | 251.4 | 250.7 | 250.6 | 251.7 | 253.4 | 255.6 | 259.5 | 265.1 | 270.3 | 273.5 |
| 59 | 260.3 | 260.9 | 257.6 | 251.4 | 247.0 | 246.4 | 247.7 | 248.1 | 247.5 | 247.4 | 248.5 | 250.1 | 252.3 | 256.3 | 261.9 | 267.3 | 270.5 |
| 60 | 258.2 | 259.0 | 255.9 | 249.8 | 244.9 | 243.7 | 244.4 | 244.6 | 244.0 | 244.1 | 245.1 | 246.6 | 248.8 | 252.9 | 258.6 | 264.0 | 267.2 |
| 61 | 255.8 | 256.9 | 254.1 | 248.1 | 242.9 | 241.0 | 241.0 | 240.8 | 240.4 | 240.6 | 241.7 | 243.1 | 245.2 | 249.3 | 255.0 | 260.5 | 263.7 |
| 62 | 253.3 | 254.5 | 252.1 | 246.3 | 240.9 | 238.2 | 237.5 | 237.0 | 236.6 | 237.0 | 238.1 | 239.4 | 241.5 | 245.6 | 251.3 | 256.8 | 260.0 |
| 63 | 250.7 | 252.0 | 250.0 | 244.6 | 239.0 | 235.5 | 233.9 | 233.1 | 232.8 | 233.4 | 234.5 | 235.7 | 237.7 | 241.8 | 247.5 | 252.9 | 256.1 |
| 64 | 248.0 | 249.4 | 247.8 | 242.8 | 237.0 | 232.8 | 230.3 | 229.1 | 228.9 | 229.8 | 231.0 | 232.0 | 233.9 | 237.8 | 243.5 | 248.8 | 252.0 |
| 65 | 245.2 | 246.6 | 245.4 | 240.9 | 235.1 | 230.1 | 226.8 | 225.1 | 225.1 | 226.2 | 227.4 | 228.3 | 230.0 | 233.8 | 239.4 | 244.6 | 247.7 |
| 66 | 242.5 | 243.9 | 243.0 | 239.0 | 233.2 | 227.4 | 223.2 | 221.1 | 221.2 | 222.6 | 223.9 | 224.6 | 226.1 | 229.7 | 235.1 | 240.2 | 243.2 |
| 67 | 239.9 | 241.1 | 240.6 | 237.0 | 231.2 | 224.8 | 219.7 | 217.2 | 217.5 | 219.2 | 220.5 | 221.0 | 222.2 | 225.6 | 230.8 | 235.7 | 238.5 |
| 68 | 237.3 | 238.4 | 238.0 | 234.9 | 229.0 | 222.0 | 216.3 | 213.5 | 213.8 | 215.8 | 217.1 | 217.4 | 218.3 | 221.4 | 226.3 | 231.0 | 233.7 |
| 69 | 235.0 | 235.8 | 235.5 | 232.6 | 226.8 | 219.3 | 212.9 | 209.8 | 210.3 | 212.5 | 213.8 | 213.9 | 214.4 | 217.1 | 221.8 | 226.2 | 228.8 |
| 70 | 232.8 | 233.3 | 232.9 | 230.2 | 224.3 | 216.4 | 209.6 | 206.4 | 207.0 | 209.4 | 210.7 | 210.4 | 210.5 | 212.8 | 217.1 | 221.3 | 223.6 |
| 71 | 230.9 | 231.0 | 230.4 | 227.6 | 221.6 | 213.5 | 206.5 | 203.2 | 203.9 | 206.4 | 207.7 | 207.1 | 206.6 | 208.5 | 212.4 | 216.2 | 218.4 |
| 72 | 229.2 | 228.9 | 227.9 | 224.8 | 218.7 | 210.5 | 203.5 | 200.2 | 201.0 | 203.7 | 204.8 | 203.8 | 202.8 | 204.1 | 207.5 | 211.0 | 212.9 |
| 73 | 227.8 | 227.1 | 225.4 | 221.8 | 215.6 | 207.5 | 200.7 | 197.5 | 198.5 | 201.1 | 202.1 | 200.7 | 199.1 | 199.8 | 202.6 | 205.7 | 207.4 |
| 74 | 226.7 | 225.5 | 223.1 | 218.9 | 212.4 | 204.6 | 198.1 | 195.2 | 196.2 | 198.9 | 199.6 | 197.5 | 195.5 | 195.4 | 197.7 | 200.3 | 201.7 |
| 75 | 225.7 | 224.1 | 220.9 | 215.9 | 209.2 | 201.8 | 195.8 | 193.3 | 194.4 | 196.9 | 197.4 | 194.9 | 192.0 | 191.1 | 192.7 | 194.8 | 195.9 |
| 76 | 225.0 | 222.9 | 218.9 | 213.2 | 206.2 | 199.2 | 193.9 | 191.8 | 193.0 | 195.3 | 195.4 | 192.4 | 188.6 | 186.9 | 187.7 | 189.1 | 190.0 |
| 77 | 224.4 | 221.8 | 217.2 | 210.9 | 203.8 | 197.2 | 192.5 | 190.9 | 192.2 | 194.2 | 193.8 | 190.1 | 185.5 | 182.9 | 182.7 | 183.5 | 184.0 |
| 78 | 223.8 | 220.9 | 215.9 | 209.3 | 202.2 | 195.9 | 191.7 | 190.6 | 192.0 | 193.6 | 192.5 | 188.1 | 182.7 | 179.0 | 177.7 | 177.8 | 178.0 |
| 79 | 223.1 | 219.8 | 214.9 | 208.8 | 201.9 | 195.8 | 191.9 | 191.1 | 192.6 | 193.8 | 191.9 | 186.6 | 180.3 | 175.3 | 172.7 | 172.0 | 172.1 |
| 80 | 222.1 | 218.6 | 214.6 | 209.9 | 203.8 | 197.3 | 193.1 | 192.6 | 194.2 | 194.8 | 191.9 | 185.6 | 178.3 | 172.0 | 167.9 | 166.3 | 166.2 |

19

JULY                                          ZONAL MEAN TEMPERATURE (K)


| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 178.8 | 188.4 | 201.5 | 212.9 | 216.9 | 213.5 | 208.2 | 205.3 | 204.9 | 205.5 | 206.6 | 209.2 | 214.1 | 220.1 | 225.5 | 229.1 | 231.1 |
| 19 | 170.7 | 182.2 | 198.2 | 212.0 | 217.0 | 213.8 | 208.8 | 206.5 | 206.9 | 208.1 | 209.5 | 211.9 | 216.1 | 221.1 | 225.5 | 228.7 | 230.8 |
| 20 | 167.3 | 179.1 | 195.8 | 211.1 | 217.6 | 215.1 | 210.3 | 208.3 | 209.2 | 210.8 | 212.2 | 214.4 | 218.0 | 222.1 | 225.7 | 228.7 | 230.9 |
| 21 | 167.0 | 178.0 | 194.4 | 210.3 | 218.2 | 216.7 | 212.3 | 210.5 | 211.6 | 213.4 | 214.8 | 216.7 | 219.7 | 223.2 | 226.2 | 228.9 | 231.2 |
| 22 | 168.8 | 178.6 | 193.8 | 209.7 | 218.7 | 218.5 | 214.6 | 212.9 | 214.0 | 215.8 | 217.1 | 218.8 | 221.4 | 224.3 | 226.9 | 229.4 | 231.8 |
| 23 | 172.2 | 180.3 | 193.9 | 209.3 | 219.2 | 220.2 | 217.0 | 215.4 | 216.4 | 218.1 | 219.3 | 220.7 | 223.0 | 225.5 | 227.8 | 230.2 | 232.6 |
| 24 | 176.7 | 183.0 | 194.7 | 209.0 | 219.5 | 221.8 | 219.4 | 217.9 | 218.7 | 220.3 | 221.3 | 222.5 | 224.5 | 226.8 | 228.9 | 231.2 | 233.5 |
| 25 | 182.0 | 186.4 | 196.0 | 209.0 | 219.6 | 223.1 | 221.7 | 220.3 | 221.0 | 222.3 | 223.2 | 224.2 | 226.0 | 228.2 | 230.3 | 232.4 | 234.5 |
| 26 | 187.8 | 190.4 | 197.8 | 209.3 | 219.7 | 224.3 | 223.8 | 222.7 | 223.1 | 224.1 | 224.9 | 225.9 | 227.6 | 229.7 | 231.8 | 233.8 | 235.7 |
| 27 | 193.8 | 194.7 | 200.1 | 209.8 | 219.8 | 225.2 | 225.8 | 225.0 | 225.1 | 225.9 | 226.6 | 227.5 | 229.1 | 231.3 | 233.5 | 235.5 | 237.0 |
| 28 | 199.9 | 199.4 | 202.7 | 210.6 | 219.9 | 226.0 | 227.6 | 227.2 | 227.1 | 227.6 | 228.2 | 229.1 | 230.7 | 233.0 | 235.3 | 237.3 | 238.5 |
| 29 | 205.8 | 204.1 | 205.7 | 211.8 | 220.2 | 226.7 | 229.3 | 229.3 | 229.0 | 229.2 | 229.8 | 230.8 | 232.4 | 234.8 | 237.4 | 239.2 | 240.1 |
| 30 | 211.5 | 208.9 | 208.9 | 213.3 | 220.6 | 227.5 | 231.0 | 231.4 | 230.9 | 230.9 | 231.5 | 232.5 | 234.2 | 236.8 | 239.6 | 241.4 | 241.9 |
| 31 | 216.8 | 213.7 | 212.4 | 215.1 | 221.3 | 228.3 | 232.6 | 233.4 | 232.8 | 232.6 | 233.2 | 234.2 | 236.1 | 238.9 | 241.9 | 243.7 | 243.8 |
| 32 | 221.7 | 218.5 | 216.1 | 217.1 | 222.3 | 229.3 | 234.3 | 235.5 | 234.7 | 234.3 | 234.9 | 236.1 | 238.0 | 241.1 | 244.4 | 246.1 | 245.9 |
| 33 | 226.2 | 223.0 | 219.8 | 219.5 | 223.6 | 230.5 | 236.0 | 237.6 | 236.7 | 236.2 | 236.8 | 238.1 | 240.1 | 243.4 | 246.9 | 248.6 | 248.1 |
| 34 | 230.2 | 227.4 | 223.7 | 222.1 | 225.2 | 231.9 | 237.8 | 239.7 | 238.7 | 238.1 | 238.7 | 240.1 | 242.3 | 245.8 | 249.5 | 251.2 | 250.5 |
| 35 | 233.9 | 231.5 | 227.6 | 225.0 | 227.2 | 233.5 | 239.7 | 241.8 | 240.8 | 240.1 | 240.8 | 242.3 | 244.6 | 248.3 | 252.2 | 253.9 | 253.0 |
| 36 | 237.2 | 235.4 | 231.4 | 228.1 | 229.4 | 235.5 | 241.8 | 244.1 | 243.0 | 242.2 | 242.9 | 244.6 | 247.0 | 250.8 | 254.9 | 256.6 | 255.6 |
| 37 | 240.2 | 239.1 | 235.2 | 231.3 | 231.9 | 237.7 | 244.0 | 246.3 | 245.2 | 244.4 | 245.2 | 246.9 | 249.4 | 253.4 | 257.6 | 259.4 | 258.2 |
| 38 | 243.0 | 242.5 | 238.8 | 234.6 | 234.7 | 240.1 | 246.3 | 248.6 | 247.5 | 246.6 | 247.5 | 249.2 | 251.8 | 255.9 | 260.3 | 262.1 | 261.0 |
| 39 | 245.6 | 245.7 | 242.3 | 238.0 | 237.7 | 242.7 | 248.7 | 251.0 | 249.8 | 248.9 | 249.8 | 251.6 | 254.3 | 258.5 | 262.9 | 264.8 | 263.7 |
| 40 | 248.2 | 248.7 | 245.7 | 241.3 | 240.8 | 245.5 | 251.2 | 253.3 | 252.1 | 251.2 | 252.1 | 254.0 | 256.7 | 260.9 | 265.4 | 267.4 | 266.4 |
| 41 | 250.7 | 251.5 | 248.8 | 244.6 | 243.9 | 248.3 | 253.7 | 255.6 | 254.4 | 253.5 | 254.4 | 256.3 | 259.0 | 263.2 | 267.8 | 269.9 | 269.1 |
| 42 | 253.2 | 254.1 | 251.6 | 247.7 | 247.0 | 251.1 | 256.1 | 257.8 | 256.5 | 255.7 | 256.6 | 258.5 | 261.2 | 265.4 | 269.9 | 272.2 | 271.7 |
| 43 | 255.7 | 256.5 | 254.2 | 250.6 | 250.0 | 253.8 | 258.4 | 259.9 | 258.6 | 257.8 | 258.6 | 260.5 | 263.2 | 267.4 | 271.9 | 274.3 | 274.1 |
| 44 | 258.1 | 258.7 | 256.5 | 253.2 | 252.8 | 256.4 | 260.6 | 261.8 | 260.5 | 259.7 | 260.5 | 262.4 | 265.0 | 269.1 | 273.6 | 276.3 | 276.3 |
| 45 | 260.6 | 260.8 | 258.5 | 255.5 | 255.3 | 258.7 | 262.5 | 263.5 | 262.1 | 261.3 | 262.2 | 264.0 | 266.6 | 270.6 | 275.1 | 277.9 | 278.3 |
| 46 | 262.9 | 262.7 | 260.3 | 257.4 | 257.3 | 260.6 | 264.2 | 264.9 | 263.5 | 262.8 | 263.6 | 265.3 | 267.8 | 271.7 | 276.2 | 279.3 | 280.1 |
| 47 | 265.1 | 264.4 | 261.7 | 258.9 | 258.9 | 262.2 | 265.4 | 265.9 | 264.6 | 263.9 | 264.7 | 266.3 | 268.7 | 272.5 | 277.1 | 280.4 | 281.5 |
| 48 | 267.2 | 265.9 | 262.7 | 259.9 | 260.0 | 263.2 | 266.2 | 266.7 | 265.4 | 264.7 | 265.4 | 266.9 | 269.3 | 273.0 | 277.6 | 281.2 | 282.7 |
| 49 | 269.1 | 267.1 | 263.5 | 260.5 | 260.6 | 263.7 | 266.6 | 267.0 | 265.7 | 265.1 | 265.7 | 267.2 | 269.4 | 273.1 | 277.8 | 281.6 | 283.5 |
| 50 | 270.6 | 268.1 | 264.0 | 260.6 | 260.6 | 263.6 | 266.5 | 266.9 | 265.7 | 265.1 | 265.7 | 267.0 | 269.1 | 272.7 | 277.6 | 281.7 | 283.9 |
| 51 | 271.8 | 268.9 | 264.2 | 260.4 | 260.0 | 262.9 | 265.9 | 266.4 | 265.3 | 264.7 | 265.2 | 266.4 | 268.4 | 272.0 | 277.0 | 281.5 | 283.9 |
| 52 | 272.6 | 269.3 | 264.0 | 259.7 | 259.0 | 261.7 | 264.7 | 265.5 | 264.5 | 263.9 | 264.3 | 265.4 | 267.2 | 270.9 | 276.1 | 280.9 | 283.6 |
| 53 | 273.0 | 269.4 | 263.6 | 258.7 | 257.5 | 260.0 | 263.2 | 264.1 | 263.3 | 262.7 | 263.0 | 263.9 | 265.7 | 269.4 | 274.9 | 279.9 | 282.8 |
| 54 | 272.8 | 269.1 | 262.9 | 257.3 | 255.6 | 257.9 | 261.1 | 262.3 | 261.7 | 261.1 | 261.3 | 262.0 | 263.8 | 267.6 | 273.3 | 278.6 | 281.7 |
| 55 | 272.2 | 268.5 | 261.9 | 255.7 | 253.4 | 255.4 | 258.7 | 260.2 | 259.8 | 259.2 | 259.3 | 259.8 | 261.4 | 265.4 | 271.3 | 277.0 | 280.2 |
| 56 | 271.0 | 267.5 | 260.7 | 253.9 | 250.9 | 252.6 | 256.0 | 257.7 | 257.5 | 257.0 | 256.9 | 257.2 | 258.8 | 262.9 | 269.1 | 275.0 | 278.4 |
| 57 | 269.4 | 266.1 | 259.2 | 251.9 | 248.4 | 249.7 | 253.0 | 254.9 | 254.4 | 254.2 | 254.4 | 255.9 | 260.1 | 266.6 | 272.7 | 276.3 |  |
| 58 | 267.3 | 264.3 | 257.5 | 249.8 | 245.7 | 246.6 | 249.8 | 251.9 | 252.1 | 251.7 | 251.3 | 251.2 | 252.7 | 257.1 | 263.8 | 270.2 | 273.8 |
| 59 | 264.8 | 262.2 | 255.6 | 247.7 | 243.1 | 243.4 | 246.4 | 248.6 | 249.1 | 248.7 | 248.2 | 247.9 | 249.3 | 253.8 | 260.8 | 267.3 | 271.1 |
| 60 | 262.0 | 259.8 | 253.4 | 245.5 | 240.5 | 240.3 | 243.0 | 245.3 | 245.9 | 245.6 | 244.9 | 244.4 | 245.7 | 250.3 | 257.5 | 264.2 | 268.0 |
| 61 | 258.9 | 257.0 | 251.1 | 243.3 | 237.9 | 237.2 | 239.5 | 241.7 | 242.6 | 242.3 | 241.5 | 240.8 | 242.0 | 246.7 | 254.0 | 260.8 | 264.7 |
| 62 | 255.7 | 254.1 | 248.7 | 241.1 | 235.6 | 234.3 | 236.0 | 238.2 | 239.2 | 239.0 | 238.0 | 237.1 | 238.3 | 243.0 | 250.3 | 257.2 | 261.1 |
| 63 | 252.3 | 251.0 | 246.1 | 238.9 | 233.3 | 231.5 | 232.6 | 234.5 | 235.7 | 235.6 | 234.5 | 233.3 | 234.5 | 239.1 | 246.4 | 253.3 | 257.3 |
| 64 | 248.8 | 247.8 | 243.4 | 236.8 | 231.2 | 228.8 | 229.3 | 230.9 | 232.1 | 232.2 | 230.9 | 229.7 | 230.6 | 235.2 | 242.3 | 249.2 | 253.3 |
| 65 | 245.4 | 244.5 | 240.7 | 234.7 | 229.2 | 226.2 | 226.0 | 227.3 | 228.6 | 228.7 | 227.5 | 226.1 | 226.8 | 231.1 | 238.1 | 244.8 | 248.9 |
| 66 | 242.1 | 241.2 | 238.0 | 232.6 | 227.3 | 223.8 | 222.8 | 223.7 | 225.0 | 225.3 | 224.0 | 222.5 | 223.0 | 227.1 | 233.7 | 240.2 | 244.4 |
| 67 | 238.8 | 238.0 | 235.2 | 230.6 | 225.4 | 221.5 | 219.8 | 220.2 | 221.5 | 221.9 | 220.7 | 219.0 | 219.3 | 223.0 | 229.2 | 235.5 | 239.6 |
| 68 | 235.8 | 234.9 | 232.5 | 228.5 | 223.5 | 219.2 | 216.8 | 216.7 | 217.9 | 218.5 | 217.4 | 215.7 | 215.7 | 218.8 | 224.5 | 230.5 | 234.6 |
| 69 | 232.9 | 232.0 | 229.9 | 226.4 | 221.6 | 216.9 | 213.9 | 213.4 | 214.5 | 215.2 | 214.3 | 212.5 | 212.1 | 214.7 | 219.7 | 225.3 | 229.3 |
| 70 | 230.2 | 229.3 | 227.4 | 224.2 | 219.6 | 214.6 | 211.1 | 210.1 | 211.1 | 212.0 | 211.3 | 209.5 | 208.7 | 210.5 | 214.8 | 220.0 | 223.8 |
| 71 | 227.8 | 226.8 | 225.0 | 222.0 | 217.4 | 212.3 | 208.3 | 206.9 | 207.8 | 208.9 | 208.5 | 206.6 | 205.3 | 206.4 | 209.9 | 214.5 | 218.1 |
| 72 | 225.5 | 224.6 | 222.8 | 219.7 | 215.1 | 209.9 | 205.7 | 203.9 | 204.6 | 205.9 | 205.8 | 204.0 | 202.1 | 202.2 | 204.8 | 208.8 | 212.3 |
| 73 | 223.5 | 222.7 | 220.8 | 217.4 | 212.7 | 207.4 | 203.1 | 201.1 | 201.6 | 203.0 | 203.2 | 201.4 | 199.0 | 198.1 | 199.7 | 203.1 | 206.3 |
| 74 | 221.7 | 221.0 | 219.0 | 215.1 | 210.1 | 204.8 | 200.5 | 198.4 | 198.7 | 200.3 | 200.9 | 199.1 | 196.0 | 194.0 | 194.6 | 197.3 | 200.2 |
| 75 | 220.0 | 219.6 | 217.3 | 212.9 | 207.5 | 202.3 | 198.2 | 196.0 | 196.2 | 197.9 | 198.8 | 196.9 | 193.1 | 190.0 | 189.5 | 191.5 | 194.1 |
| 76 | 218.6 | 218.4 | 215.9 | 210.8 | 205.0 | 199.9 | 196.1 | 193.9 | 194.1 | 195.8 | 196.9 | 195.0 | 190.4 | 186.0 | 184.4 | 185.7 | 188.0 |
| 77 | 217.3 | 217.4 | 214.6 | 209.1 | 202.9 | 197.8 | 194.2 | 192.3 | 192.4 | 194.2 | 195.4 | 193.2 | 187.7 | 182.2 | 179.4 | 180.0 | 182.0 |
| 78 | 216.2 | 216.3 | 213.5 | 207.7 | 201.4 | 196.3 | 192.9 | 191.1 | 191.3 | 193.1 | 194.1 | 191.5 | 185.2 | 178.4 | 174.5 | 174.3 | 176.2 |
| 79 | 215.4 | 215.1 | 212.4 | 207.1 | 200.9 | 195.7 | 192.2 | 190.7 | 191.1 | 192.8 | 193.3 | 190.1 | 182.9 | 174.8 | 169.7 | 168.9 | 170.6 |
| 80 | 214.8 | 213.6 | 211.4 | 207.5 | 202.1 | 196.5 | 192.5 | 191.2 | 192.0 | 193.4 | 193.1 | 188.9 | 180.7 | 171.4 | 165.1 | 163.6 | 165.3 |

20

ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 170.4 | 184.1 | 201.6 | 214.8 | 217.9 | 213.5 | 207.9 | 204.7 | 204.2 | 205.2 | 207.4 | 210.7 | 215.2 | 220.0 | 224.3 | 227.2 | 228.9 |
| 19 | 161.0 | 177.2 | 198.3 | 214.3 | 218.2 | 213.7 | 208.2 | 205.5 | 205.5 | 207.1 | 209.4 | 212.6 | 216.4 | 220.4 | 223.9 | 226.7 | 228.5 |
| 20 | 158.0 | 174.6 | 196.7 | 214.0 | 218.9 | 214.8 | 209.5 | 207.1 | 207.6 | 209.4 | 211.7 | 214.5 | 217.7 | 221.1 | 224.0 | 226.5 | 228.3 |
| 21 | 159.1 | 174.9 | 196.4 | 214.0 | 219.9 | 216.5 | 211.5 | 209.3 | 210.0 | 211.9 | 213.9 | 216.3 | 219.2 | 222.0 | 224.5 | 226.6 | 228.3 |
| 22 | 162.9 | 177.3 | 197.1 | 214.1 | 220.8 | 218.4 | 213.8 | 211.8 | 212.6 | 214.4 | 216.2 | 218.2 | 220.6 | 223.0 | 225.1 | 227.0 | 228.5 |
| 23 | 168.6 | 181.1 | 198.6 | 214.5 | 221.7 | 220.3 | 216.3 | 214.5 | 215.3 | 216.9 | 218.3 | 219.9 | 222.0 | 224.2 | 226.0 | 227.6 | 228.9 |
| 24 | 175.8 | 186.0 | 200.8 | 215.0 | 222.5 | 222.1 | 218.8 | 217.1 | 217.8 | 219.2 | 220.3 | 221.5 | 223.4 | 225.4 | 227.1 | 228.4 | 229.5 |
| 25 | 183.9 | 191.6 | 203.5 | 215.8 | 223.1 | 223.7 | 221.2 | 219.7 | 220.3 | 221.4 | 222.2 | 223.1 | 224.8 | 226.7 | 228.3 | 229.4 | 230.3 |
| 26 | 192.5 | 197.8 | 206.6 | 216.7 | 223.6 | 225.1 | 223.4 | 222.2 | 222.5 | 223.4 | 224.0 | 224.7 | 226.2 | 228.1 | 229.7 | 230.6 | 231.2 |
| 27 | 201.2 | 204.1 | 210.1 | 217.9 | 224.2 | 226.3 | 225.5 | 224.5 | 224.7 | 225.3 | 225.7 | 226.2 | 227.6 | 229.5 | 231.1 | 232.0 | 232.3 |
| 28 | 209.7 | 210.4 | 213.8 | 219.3 | 224.7 | 227.3 | 227.4 | 226.8 | 226.7 | 227.1 | 227.3 | 227.8 | 229.1 | 231.0 | 232.8 | 233.6 | 233.6 |
| 29 | 217.5 | 216.7 | 217.6 | 221.0 | 225.3 | 228.3 | 229.2 | 228.9 | 228.7 | 228.8 | 229.0 | 229.4 | 230.6 | 232.6 | 234.5 | 235.3 | 235.1 |
| 30 | 224.6 | 221.6 | 221.5 | 222.8 | 226.0 | 229.3 | 231.0 | 231.0 | 230.6 | 230.5 | 230.6 | 231.1 | 232.3 | 234.4 | 234.4 | 237.2 | 236.7 |
| 31 | 230.8 | 228.1 | 225.5 | 224.9 | 226.9 | 230.3 | 232.7 | 233.2 | 232.6 | 232.2 | 232.4 | 232.8 | 234.0 | 236.2 | 238.4 | 239.2 | 238.5 |
| 32 | 236.0 | 233.1 | 229.4 | 227.1 | 228.0 | 231.4 | 234.5 | 235.3 | 234.6 | 234.1 | 234.2 | 234.7 | 235.9 | 238.1 | 240.5 | 241.3 | 240.5 |
| 33 | 240.3 | 237.7 | 233.3 | 229.5 | 229.4 | 232.7 | 236.3 | 237.5 | 236.7 | 236.0 | 236.1 | 236.7 | 237.9 | 240.2 | 242.8 | 243.6 | 242.6 |
| 34 | 243.7 | 241.8 | 237.0 | 232.1 | 231.0 | 234.2 | 238.3 | 239.8 | 238.9 | 238.0 | 238.2 | 238.8 | 240.0 | 242.4 | 245.1 | 246.0 | 244.8 |
| 35 | 246.5 | 245.4 | 240.6 | 234.8 | 232.8 | 235.9 | 240.4 | 242.2 | 241.2 | 240.2 | 240.3 | 241.0 | 242.2 | 244.7 | 247.5 | 248.4 | 247.1 |
| 36 | 248.8 | 248.6 | 244.1 | 237.6 | 234.9 | 237.8 | 242.6 | 244.7 | 243.7 | 242.5 | 242.6 | 243.3 | 244.5 | 247.1 | 250.0 | 250.9 | 249.5 |
| 37 | 250.7 | 251.5 | 247.3 | 240.4 | 237.2 | 240.0 | 245.0 | 247.3 | 246.2 | 245.0 | 245.0 | 245.6 | 246.9 | 249.5 | 252.5 | 253.4 | 252.0 |
| 38 | 252.5 | 254.0 | 250.2 | 243.2 | 239.6 | 242.3 | 247.5 | 249.9 | 248.9 | 247.5 | 247.4 | 248.0 | 249.4 | 252.0 | 255.0 | 255.9 | 254.5 |
| 39 | 254.3 | 256.3 | 252.9 | 245.9 | 242.2 | 244.8 | 250.1 | 252.7 | 251.6 | 250.1 | 249.8 | 250.4 | 251.8 | 254.4 | 257.4 | 258.4 | 256.9 |
| 40 | 256.1 | 258.4 | 255.4 | 248.5 | 244.8 | 247.4 | 252.7 | 255.4 | 254.4 | 252.7 | 252.3 | 252.8 | 254.2 | 256.8 | 259.8 | 260.7 | 259.4 |
| 41 | 258.1 | 260.4 | 257.5 | 250.9 | 247.4 | 250.0 | 255.4 | 258.1 | 257.1 | 255.3 | 254.7 | 255.1 | 256.5 | 259.1 | 262.0 | 263.0 | 261.7 |
| 42 | 260.1 | 262.2 | 259.3 | 253.1 | 249.9 | 252.6 | 257.9 | 260.7 | 259.7 | 257.7 | 257.0 | 257.3 | 258.6 | 261.3 | 264.1 | 265.1 | 263.9 |
| 43 | 262.4 | 263.8 | 260.9 | 255.1 | 252.3 | 255.1 | 260.4 | 263.1 | 262.1 | 260.1 | 259.1 | 259.3 | 260.6 | 263.2 | 266.0 | 267.0 | 266.0 |
| 44 | 264.7 | 265.4 | 262.1 | 256.7 | 254.4 | 257.4 | 262.6 | 265.2 | 264.2 | 262.1 | 261.0 | 261.1 | 262.4 | 265.0 | 267.7 | 268.8 | 267.9 |
| 45 | 267.1 | 266.8 | 263.0 | 257.9 | 256.1 | 259.3 | 264.5 | 267.1 | 266.1 | 263.9 | 262.6 | 262.6 | 263.8 | 266.4 | 269.1 | 270.2 | 269.6 |
| 46 | 269.4 | 268.0 | 263.6 | 258.8 | 257.5 | 261.0 | 266.0 | 268.6 | 267.6 | 265.4 | 264.0 | 263.8 | 265.0 | 267.5 | 270.2 | 271.5 | 271.1 |
| 47 | 271.6 | 269.0 | 263.9 | 259.2 | 258.4 | 262.1 | 267.2 | 269.6 | 268.7 | 266.5 | 264.9 | 264.6 | 265.7 | 268.2 | 271.0 | 272.4 | 272.3 |
| 48 | 273.6 | 269.7 | 263.9 | 259.2 | 258.9 | 262.8 | 267.8 | 270.2 | 269.3 | 267.1 | 265.5 | 265.1 | 266.1 | 268.5 | 271.4 | 273.1 | 273.2 |
| 49 | 275.3 | 270.2 | 263.6 | 258.9 | 258.8 | 263.0 | 268.0 | 270.3 | 269.4 | 267.4 | 265.7 | 265.2 | 266.1 | 268.5 | 271.4 | 273.4 | 273.9 |
| 50 | 276.5 | 270.3 | 263.0 | 258.1 | 258.2 | 262.6 | 267.6 | 269.9 | 269.1 | 267.1 | 265.5 | 264.9 | 265.7 | 268.0 | 271.1 | 273.4 | 274.2 |
| 51 | 277.1 | 270.1 | 262.1 | 257.0 | 257.2 | 261.7 | 266.7 | 268.9 | 268.2 | 266.4 | 265.0 | 264.3 | 264.9 | 267.2 | 270.5 | 273.1 | 274.3 |
| 52 | 277.2 | 269.5 | 260.9 | 255.5 | 255.7 | 260.2 | 265.3 | 267.5 | 266.9 | 265.3 | 264.0 | 263.2 | 263.6 | 265.9 | 269.5 | 272.6 | 274.1 |
| 53 | 276.6 | 268.6 | 259.5 | 253.8 | 253.9 | 258.4 | 263.4 | 265.7 | 265.2 | 263.9 | 262.6 | 261.8 | 262.1 | 264.3 | 268.1 | 271.7 | 273.6 |
| 54 | 275.4 | 267.2 | 257.8 | 251.9 | 251.7 | 256.1 | 261.1 | 263.4 | 263.1 | 262.0 | 261.0 | 260.1 | 260.1 | 262.1 | 266.5 | 270.5 | 272.8 |
| 55 | 273.5 | 265.4 | 256.0 | 249.8 | 249.3 | 253.6 | 258.5 | 260.8 | 260.7 | 259.9 | 259.0 | 258.0 | 257.9 | 260.2 | 264.6 | 269.1 | 271.8 |
| 56 | 271.1 | 263.3 | 254.0 | 247.5 | 246.8 | 250.8 | 255.5 | 257.9 | 258.0 | 257.6 | 256.9 | 255.8 | 255.4 | 257.7 | 262.4 | 267.4 | 270.5 |
| 57 | 268.2 | 260.9 | 251.8 | 245.2 | 244.1 | 247.8 | 252.4 | 254.8 | 255.0 | 255.0 | 254.5 | 253.3 | 252.8 | 255.0 | 260.1 | 265.5 | 268.9 |
| 58 | 265.0 | 258.2 | 249.5 | 242.8 | 241.5 | 244.8 | 249.2 | 251.6 | 252.2 | 252.4 | 252.0 | 250.7 | 249.9 | 252.1 | 257.5 | 263.3 | 267.1 |
| 59 | 261.4 | 255.3 | 247.0 | 240.5 | 238.9 | 241.8 | 245.9 | 248.3 | 249.1 | 249.6 | 249.4 | 247.9 | 246.9 | 249.1 | 254.7 | 261.0 | 265.0 |
| 60 | 257.7 | 252.3 | 244.6 | 238.2 | 236.4 | 238.9 | 242.6 | 244.9 | 246.0 | 246.8 | 246.6 | 245.0 | 243.9 | 246.0 | 251.8 | 258.3 | 262.7 |
| 61 | 254.0 | 249.1 | 242.0 | 236.0 | 234.0 | 236.1 | 239.3 | 241.5 | 242.9 | 244.0 | 243.9 | 242.1 | 240.8 | 242.9 | 248.7 | 255.5 | 260.1 |
| 62 | 250.3 | 246.0 | 239.5 | 233.9 | 231.8 | 233.4 | 236.1 | 238.2 | 239.8 | 241.1 | 241.1 | 239.2 | 237.6 | 239.6 | 245.5 | 252.5 | 257.3 |
| 63 | 246.7 | 242.8 | 237.0 | 231.9 | 229.8 | 230.9 | 233.1 | 235.0 | 236.7 | 238.3 | 238.3 | 236.2 | 234.5 | 236.4 | 242.2 | 249.2 | 254.1 |
| 64 | 243.3 | 239.8 | 234.6 | 230.0 | 228.0 | 228.6 | 230.1 | 231.8 | 233.7 | 235.4 | 235.5 | 233.3 | 231.4 | 233.1 | 238.8 | 245.8 | 250.8 |
| 65 | 240.0 | 236.8 | 232.3 | 228.2 | 226.3 | 226.4 | 227.3 | 228.7 | 230.6 | 232.6 | 232.6 | 230.3 | 228.3 | 229.8 | 235.2 | 242.1 | 247.1 |
| 66 | 237.1 | 234.0 | 230.0 | 226.6 | 224.8 | 224.4 | 224.7 | 225.6 | 227.6 | 229.7 | 229.8 | 227.4 | 225.3 | 226.4 | 231.6 | 238.2 | 243.1 |
| 67 | 234.3 | 231.5 | 227.9 | 225.0 | 223.3 | 222.5 | 222.1 | 222.7 | 224.6 | 226.7 | 226.9 | 224.5 | 222.2 | 223.1 | 227.8 | 234.0 | 238.9 |
| 68 | 231.8 | 229.1 | 226.0 | 223.6 | 222.0 | 220.7 | 219.6 | 219.7 | 221.5 | 223.7 | 224.0 | 221.7 | 219.2 | 219.7 | 223.9 | 229.7 | 234.3 |
| 69 | 229.4 | 226.9 | 224.2 | 222.2 | 220.6 | 218.9 | 217.2 | 216.8 | 218.4 | 220.6 | 221.0 | 218.8 | 216.3 | 216.3 | 219.9 | 225.2 | 229.6 |
| 70 | 227.2 | 225.0 | 222.6 | 220.8 | 219.2 | 217.0 | 214.8 | 213.9 | 215.2 | 217.4 | 218.0 | 216.0 | 213.3 | 212.9 | 215.7 | 220.4 | 224.5 |
| 71 | 225.1 | 223.2 | 221.2 | 219.4 | 217.6 | 215.1 | 212.4 | 211.0 | 211.9 | 214.1 | 215.0 | 213.2 | 210.4 | 209.4 | 211.5 | 215.5 | 219.3 |
| 72 | 223.0 | 221.7 | 220.0 | 218.1 | 215.9 | 213.1 | 210.0 | 208.1 | 208.6 | 210.7 | 211.9 | 210.5 | 207.5 | 205.9 | 207.1 | 210.5 | 213.9 |
| 73 | 220.9 | 220.4 | 218.9 | 216.7 | 214.1 | 211.0 | 207.6 | 205.3 | 205.3 | 207.3 | 208.8 | 207.7 | 204.6 | 202.3 | 202.7 | 205.4 | 208.5 |
| 74 | 218.9 | 219.1 | 218.0 | 215.3 | 212.1 | 208.7 | 205.1 | 202.4 | 202.0 | 203.9 | 205.8 | 205.1 | 201.8 | 198.8 | 198.3 | 200.3 | 203.0 |
| 75 | 216.9 | 218.1 | 217.2 | 213.9 | 210.0 | 206.3 | 202.7 | 199.7 | 198.9 | 200.7 | 203.0 | 202.6 | 199.1 | 195.3 | 193.9 | 195.3 | 197.6 |
| 76 | 215.0 | 217.1 | 216.4 | 212.5 | 207.8 | 203.9 | 200.4 | 197.3 | 196.1 | 197.8 | 200.3 | 200.2 | 196.4 | 191.8 | 189.6 | 190.4 | 192.4 |
| 77 | 213.4 | 216.2 | 215.7 | 211.1 | 205.8 | 201.7 | 198.3 | 195.2 | 193.8 | 195.4 | 198.1 | 198.1 | 193.9 | 188.5 | 185.5 | 185.7 | 187.5 |
| 78 | 212.4 | 215.4 | 214.8 | 209.9 | 204.1 | 199.9 | 196.7 | 193.7 | 192.3 | 193.8 | 196.5 | 196.3 | 191.7 | 185.5 | 181.6 | 181.3 | 183.1 |
| 79 | 212.3 | 214.7 | 213.7 | 208.8 | 203.1 | 198.8 | 195.6 | 193.0 | 192.0 | 193.4 | 195.7 | 195.1 | 189.8 | 182.7 | 178.1 | 177.4 | 179.2 |
| 80 | 213.9 | 214.2 | 212.3 | 208.2 | 203.2 | 198.8 | 195.6 | 193.6 | 193.3 | 194.7 | 196.2 | 194.6 | 188.4 | 180.5 | 175.1 | 174.1 | 176.1 |

ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 175.9 | 193.2 | 211.7 | 220.5 | 218.2 | 212.2 | 207.5 | 204.7 | 203.5 | 204.3 | 207.0 | 210.9 | 215.1 | 219.4 | 222.9 | 224.6 | 224.7 |
| 19 | 170.8 | 189.6 | 210.3 | 220.6 | 218.6 | 212.6 | 208.2 | 206.0 | 205.2 | 206.0 | 208.4 | 211.9 | 215.6 | 219.2 | 222.2 | 223.6 | 223.6 |
| 20 | 170.4 | 189.0 | 209.9 | 220.7 | 219.3 | 213.7 | 209.6 | 207.8 | 207.4 | 208.3 | 210.4 | 213.3 | 216.4 | 219.5 | 222.0 | 223.1 | 223.0 |
| 21 | 173.1 | 190.6 | 210.2 | 220.9 | 220.2 | 215.2 | 211.6 | 210.2 | 210.1 | 210.9 | 212.7 | 214.9 | 217.5 | 220.0 | 222.1 | 222.9 | 222.7 |
| 22 | 178.1 | 193.7 | 211.2 | 221.1 | 221.1 | 217.0 | 213.8 | 212.7 | 212.9 | 213.7 | 215.0 | 216.7 | 218.6 | 220.7 | 222.4 | 223.0 | 222.6 |
| 23 | 184.7 | 197.9 | 212.6 | 221.3 | 221.9 | 218.8 | 216.2 | 215.3 | 215.7 | 216.5 | 217.4 | 218.4 | 219.8 | 221.5 | 222.9 | 223.1 | 222.6 |
| 24 | 192.7 | 202.9 | 214.5 | 221.7 | 222.7 | 220.6 | 218.6 | 218.0 | 218.4 | 219.1 | 219.6 | 220.2 | 221.1 | 222.4 | 223.4 | 223.5 | 222.8 |
| 25 | 201.0 | 208.4 | 216.7 | 222.1 | 223.4 | 222.3 | 220.9 | 220.4 | 221.1 | 221.6 | 221.8 | 221.9 | 222.4 | 223.4 | 224.2 | 223.9 | 223.0 |
| 26 | 209.8 | 214.2 | 219.2 | 222.8 | 224.1 | 223.9 | 223.2 | 223.1 | 223.5 | 223.9 | 223.9 | 223.6 | 223.7 | 224.5 | 225.0 | 224.4 | 223.2 |
| 27 | 218.7 | 220.1 | 221.9 | 223.6 | 224.8 | 225.3 | 225.4 | 225.5 | 225.9 | 226.1 | 225.8 | 225.3 | 225.1 | 225.6 | 225.9 | 225.1 | 223.6 |
| 28 | 227.1 | 225.9 | 224.7 | 224.6 | 225.5 | 226.8 | 227.6 | 227.9 | 228.1 | 228.1 | 227.7 | 226.9 | 226.5 | 226.8 | 226.9 | 225.8 | 224.0 |
| 29 | 235.0 | 231.4 | 227.7 | 225.8 | 226.3 | 228.2 | 229.7 | 230.2 | 230.2 | 230.1 | 229.6 | 228.7 | 228.1 | 228.2 | 228.1 | 226.7 | 224.6 |
| 30 | 242.0 | 236.6 | 230.7 | 227.2 | 227.3 | 229.6 | 231.8 | 232.6 | 232.4 | 232.0 | 231.4 | 230.5 | 229.7 | 229.6 | 229.4 | 227.8 | 225.3 |
| 31 | 248.1 | 241.4 | 233.8 | 228.9 | 228.4 | 231.1 | 233.9 | 234.9 | 234.5 | 234.0 | 233.3 | 232.3 | 231.5 | 231.2 | 230.9 | 229.0 | 226.2 |
| 32 | 253.1 | 245.8 | 236.9 | 230.8 | 229.7 | 232.7 | 236.1 | 237.3 | 236.7 | 236.0 | 235.3 | 234.3 | 233.3 | 233.0 | 232.5 | 230.3 | 227.2 |
| 33 | 257.3 | 249.6 | 240.0 | 232.8 | 231.2 | 234.4 | 238.3 | 239.7 | 239.0 | 238.1 | 237.4 | 236.4 | 235.4 | 235.0 | 234.3 | 231.9 | 228.5 |
| 34 | 260.6 | 253.1 | 242.9 | 235.0 | 233.0 | 236.3 | 240.6 | 242.3 | 241.4 | 240.4 | 239.6 | 238.6 | 237.5 | 237.1 | 236.2 | 233.6 | 229.9 |
| 35 | 263.2 | 256.0 | 245.8 | 237.4 | 235.0 | 238.3 | 243.0 | 244.9 | 244.0 | 242.7 | 241.9 | 240.9 | 239.8 | 239.3 | 238.3 | 235.4 | 231.4 |
| 36 | 265.2 | 258.6 | 248.6 | 239.9 | 237.2 | 240.6 | 245.5 | 247.6 | 246.6 | 245.2 | 244.3 | 243.3 | 242.3 | 241.7 | 240.6 | 237.4 | 233.2 |
| 37 | 266.8 | 260.9 | 251.2 | 242.4 | 239.6 | 242.9 | 248.1 | 250.3 | 249.4 | 247.9 | 246.9 | 245.8 | 244.8 | 244.2 | 242.9 | 239.5 | 235.1 |
| 38 | 268.2 | 262.8 | 253.6 | 245.0 | 242.1 | 245.4 | 250.7 | 253.1 | 252.2 | 250.6 | 249.4 | 248.4 | 247.4 | 246.7 | 245.3 | 241.8 | 237.2 |
| 39 | 269.4 | 264.5 | 255.8 | 247.5 | 244.7 | 248.0 | 253.3 | 255.9 | 255.1 | 253.3 | 252.0 | 250.9 | 250.0 | 249.3 | 247.8 | 244.0 | 239.4 |
| 40 | 270.5 | 265.9 | 257.7 | 249.7 | 247.3 | 250.6 | 256.0 | 258.6 | 257.9 | 256.1 | 254.6 | 253.4 | 252.5 | 251.9 | 250.2 | 246.3 | 241.7 |
| 41 | 271.6 | 267.1 | 259.4 | 252.2 | 249.9 | 253.2 | 258.5 | 261.3 | 260.7 | 258.8 | 257.1 | 255.9 | 255.0 | 254.4 | 252.6 | 248.6 | 244.0 |
| 42 | 272.7 | 268.2 | 260.8 | 254.2 | 252.3 | 255.7 | 260.9 | 263.7 | 263.3 | 261.3 | 259.5 | 258.2 | 257.4 | 256.7 | 254.9 | 250.9 | 246.3 |
| 43 | 273.8 | 269.0 | 261.9 | 256.0 | 254.6 | 258.0 | 263.1 | 265.9 | 265.6 | 263.7 | 261.7 | 260.3 | 259.6 | 258.9 | 257.0 | 253.0 | 248.6 |
| 44 | 275.0 | 269.7 | 262.8 | 257.5 | 256.7 | 260.1 | 265.0 | 267.9 | 267.7 | 265.7 | 263.6 | 262.2 | 261.5 | 260.8 | 258.9 | 255.0 | 250.9 |
| 45 | 276.1 | 270.2 | 263.3 | 258.7 | 258.4 | 261.9 | 266.6 | 269.4 | 269.4 | 267.4 | 265.2 | 263.8 | 263.1 | 262.5 | 260.5 | 256.8 | 253.0 |
| 46 | 277.0 | 270.4 | 263.5 | 259.5 | 259.7 | 263.3 | 267.8 | 270.6 | 270.6 | 266.2 | 266.5 | 265.0 | 264.4 | 263.7 | 261.8 | 258.4 | 255.0 |
| 47 | 277.8 | 270.5 | 263.4 | 259.9 | 260.6 | 264.4 | 268.6 | 271.3 | 271.4 | 269.6 | 267.3 | 265.9 | 265.3 | 264.6 | 262.7 | 259.7 | 256.7 |
| 48 | 278.4 | 270.3 | 263.0 | 259.9 | 261.1 | 264.9 | 269.0 | 271.5 | 271.6 | 269.9 | 267.7 | 266.3 | 265.7 | 265.1 | 263.3 | 260.7 | 258.2 |
| 49 | 278.7 | 269.9 | 262.4 | 259.5 | 261.1 | 265.0 | 268.9 | 271.2 | 271.3 | 269.8 | 267.7 | 266.3 | 265.8 | 265.1 | 263.5 | 261.3 | 259.4 |
| 50 | 278.6 | 269.3 | 261.5 | 258.8 | 260.6 | 264.5 | 268.2 | 270.4 | 270.5 | 269.1 | 267.2 | 266.0 | 265.3 | 264.6 | 263.3 | 261.6 | 260.3 |
| 51 | 278.0 | 268.3 | 260.3 | 257.7 | 259.7 | 263.6 | 267.2 | 269.1 | 269.2 | 268.0 | 266.3 | 265.1 | 264.5 | 263.7 | 262.6 | 261.6 | 260.9 |
| 52 | 277.1 | 267.1 | 258.9 | 256.3 | 258.4 | 262.3 | 265.7 | 267.4 | 267.5 | 266.4 | 265.0 | 263.9 | 263.2 | 262.4 | 261.6 | 261.1 | 261.1 |
| 53 | 275.6 | 265.6 | 257.3 | 254.6 | 256.7 | 260.6 | 263.7 | 265.2 | 265.3 | 264.5 | 263.4 | 262.4 | 261.5 | 260.7 | 260.2 | 260.4 | 261.0 |
| 54 | 273.7 | 263.8 | 255.6 | 252.8 | 254.7 | 258.5 | 261.5 | 262.8 | 262.8 | 262.2 | 261.5 | 260.5 | 259.5 | 258.6 | 258.5 | 259.3 | 260.6 |
| 55 | 271.3 | 261.8 | 253.7 | 250.8 | 252.5 | 256.1 | 258.9 | 260.0 | 260.0 | 259.7 | 259.2 | 258.4 | 257.2 | 256.3 | 256.5 | 257.9 | 259.8 |
| 56 | 268.6 | 259.6 | 251.7 | 248.7 | 250.2 | 253.6 | 256.1 | 257.0 | 257.0 | 257.0 | 256.8 | 256.0 | 254.6 | 253.6 | 254.2 | 256.3 | 258.6 |
| 57 | 265.5 | 257.1 | 249.6 | 246.5 | 247.7 | 250.9 | 253.2 | 253.8 | 253.9 | 254.2 | 254.3 | 253.5 | 251.8 | 250.8 | 251.7 | 254.4 | 257.2 |
| 58 | 262.2 | 254.6 | 247.5 | 244.3 | 245.3 | 248.1 | 250.1 | 250.6 | 250.6 | 251.2 | 251.7 | 250.8 | 248.9 | 247.9 | 249.1 | 252.2 | 255.5 |
| 59 | 258.7 | 251.9 | 245.3 | 242.1 | 242.8 | 245.3 | 247.0 | 247.2 | 247.4 | 248.3 | 249.0 | 248.0 | 245.9 | 244.8 | 246.4 | 250.0 | 253.6 |
| 60 | 255.1 | 249.1 | 243.1 | 240.0 | 240.5 | 242.6 | 243.9 | 243.9 | 244.2 | 245.4 | 246.3 | 245.2 | 242.9 | 241.8 | 243.5 | 247.5 | 251.4 |
| 61 | 251.5 | 246.4 | 241.0 | 238.0 | 238.2 | 239.9 | 240.8 | 240.6 | 241.0 | 242.5 | 243.6 | 242.4 | 239.8 | 238.7 | 240.7 | 245.0 | 249.1 |
| 62 | 248.0 | 243.6 | 238.9 | 236.1 | 236.1 | 237.3 | 237.8 | 237.4 | 237.9 | 239.7 | 241.0 | 239.6 | 236.8 | 235.6 | 237.9 | 242.4 | 246.5 |
| 63 | 244.5 | 240.9 | 236.8 | 234.3 | 234.1 | 234.9 | 234.8 | 234.2 | 234.8 | 237.0 | 238.3 | 236.8 | 233.8 | 232.6 | 235.0 | 239.7 | 243.9 |
| 64 | 241.2 | 238.2 | 234.8 | 232.6 | 232.2 | 232.5 | 232.0 | 231.1 | 231.9 | 234.3 | 235.8 | 234.1 | 230.7 | 229.7 | 232.2 | 237.0 | 241.0 |
| 65 | 238.1 | 235.7 | 232.9 | 231.0 | 230.5 | 230.3 | 229.2 | 228.1 | 229.0 | 231.6 | 233.2 | 231.4 | 228.0 | 226.9 | 229.5 | 234.2 | 238.1 |
| 66 | 235.1 | 233.3 | 231.0 | 229.4 | 228.8 | 228.1 | 226.5 | 225.2 | 226.1 | 229.0 | 230.6 | 228.7 | 225.2 | 224.1 | 226.8 | 231.4 | 235.0 |
| 67 | 232.4 | 231.0 | 229.3 | 228.0 | 227.2 | 226.1 | 223.9 | 222.3 | 223.3 | 226.3 | 228.0 | 226.0 | 222.6 | 221.5 | 224.2 | 228.5 | 231.9 |
| 68 | 229.8 | 228.9 | 227.6 | 226.5 | 225.6 | 224.0 | 221.3 | 219.5 | 220.4 | 223.5 | 225.3 | 223.4 | 219.9 | 218.9 | 221.6 | 225.7 | 228.7 |
| 69 | 227.4 | 226.9 | 226.0 | 225.1 | 224.0 | 221.9 | 218.6 | 216.6 | 217.5 | 220.7 | 222.5 | 220.7 | 217.4 | 216.5 | 219.0 | 222.8 | 225.3 |
| 70 | 225.1 | 225.0 | 224.5 | 223.6 | 222.2 | 219.8 | 216.3 | 213.8 | 214.5 | 217.7 | 219.6 | 218.0 | 214.9 | 214.0 | 216.4 | 219.9 | 222.0 |
| 71 | 222.9 | 223.3 | 223.0 | 222.0 | 220.4 | 217.5 | 213.7 | 211.0 | 211.5 | 214.5 | 216.7 | 215.3 | 212.4 | 211.7 | 213.9 | 216.9 | 218.6 |
| 72 | 220.8 | 221.7 | 221.6 | 220.3 | 218.3 | 215.2 | 211.2 | 208.2 | 208.4 | 211.3 | 213.6 | 212.6 | 210.0 | 209.4 | 211.4 | 214.0 | 215.2 |
| 73 | 218.6 | 220.1 | 220.2 | 218.6 | 216.0 | 212.7 | 208.6 | 205.4 | 205.2 | 208.0 | 210.4 | 209.8 | 207.7 | 207.1 | 209.0 | 211.1 | 211.8 |
| 74 | 216.5 | 218.6 | 218.8 | 216.6 | 213.6 | 210.1 | 206.1 | 202.7 | 202.2 | 204.7 | 207.2 | 207.1 | 205.4 | 204.9 | 206.5 | 208.2 | 208.5 |
| 75 | 214.4 | 217.1 | 217.4 | 214.6 | 211.0 | 207.5 | 203.6 | 200.2 | 199.3 | 201.5 | 204.2 | 204.5 | 203.2 | 202.8 | 204.1 | 205.4 | 205.3 |
| 76 | 212.4 | 215.6 | 215.9 | 212.5 | 208.3 | 204.8 | 201.3 | 197.9 | 196.7 | 198.6 | 201.4 | 202.1 | 201.1 | 200.7 | 201.9 | 202.8 | 202.4 |
| 77 | 210.6 | 214.2 | 214.3 | 210.4 | 205.8 | 202.4 | 199.3 | 196.1 | 194.7 | 196.3 | 199.0 | 200.0 | 199.2 | 198.9 | 199.8 | 200.4 | 199.8 |
| 78 | 209.0 | 212.7 | 212.6 | 208.3 | 203.5 | 200.4 | 197.8 | 195.0 | 193.6 | 194.8 | 197.3 | 198.4 | 197.7 | 197.3 | 197.9 | 198.3 | 197.7 |
| 79 | 208.1 | 211.2 | 210.8 | 206.5 | 201.9 | 199.0 | 196.9 | 194.9 | 193.8 | 194.7 | 196.7 | 197.4 | 196.7 | 196.2 | 196.5 | 196.8 | 196.3 |
| 80 | 208.2 | 209.7 | 208.8 | 205.1 | 201.2 | 198.7 | 197.2 | 196.1 | 195.8 | 196.6 | 197.6 | 197.5 | 196.4 | 195.6 | 195.7 | 196.0 | 195.9 |

22

OCTOBER                                    ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 196.1 | 208.4 | 219.3 | 221.6 | 216.8 | 210.8 | 206.6 | 204.2 | 203.3 | 204.1 | 206.6 | 210.2 | 214.2 | 218.0 | 220.6 | 220.9 | 219.8 |
| 19 | 192.8 | 206.1 | 218.4 | 221.8 | 217.5 | 211.8 | 208.1 | 206.1 | 205.2 | 205.6 | 207.5 | 210.7 | 214.3 | 217.7 | 219.7 | 219.6 | 218.1 |
| 20 | 192.5 | 205.7 | 218.1 | 221.9 | 218.3 | 213.3 | 210.1 | 208.4 | 207.5 | 207.7 | 209.2 | 211.8 | 214.9 | 217.7 | 219.2 | 218.6 | 216.9 |
| 21 | 194.2 | 206.7 | 218.3 | 222.0 | 219.1 | 215.0 | 212.4 | 210.9 | 210.1 | 210.2 | 211.5 | 213.4 | 215.7 | 217.8 | 218.8 | 218.0 | 215.9 |
| 22 | 197.6 | 208.7 | 218.9 | 222.1 | 219.9 | 216.8 | 214.8 | 213.6 | 212.9 | 213.0 | 213.9 | 215.3 | 216.7 | 218.1 | 218.6 | 217.4 | 215.1 |
| 23 | 202.2 | 211.6 | 219.8 | 222.3 | 220.7 | 218.6 | 217.3 | 216.3 | 215.7 | 215.8 | 216.5 | 217.2 | 217.7 | 218.4 | 218.4 | 216.8 | 214.3 |
| 24 | 207.6 | 215.0 | 221.1 | 222.6 | 221.4 | 220.3 | 219.7 | 219.0 | 218.5 | 218.7 | 219.1 | 219.1 | 218.8 | 218.8 | 218.3 | 216.4 | 213.5 |
| 25 | 213.6 | 218.9 | 222.6 | 223.1 | 222.2 | 222.0 | 222.1 | 221.7 | 221.2 | 221.4 | 221.6 | 221.0 | 219.9 | 219.2 | 218.3 | 215.9 | 212.7 |
| 26 | 219.9 | 223.0 | 224.4 | 223.7 | 223.1 | 223.6 | 224.3 | 224.2 | 223.9 | 224.1 | 224.0 | 222.8 | 221.0 | 219.7 | 218.4 | 215.5 | 211.9 |
| 27 | 226.4 | 227.3 | 226.4 | 224.6 | 224.0 | 225.2 | 226.5 | 226.8 | 226.6 | 226.7 | 226.3 | 224.6 | 222.2 | 220.4 | 218.5 | 215.2 | 211.2 |
| 28 | 232.9 | 231.6 | 228.6 | 225.7 | 225.1 | 226.9 | 228.7 | 229.2 | 229.1 | 229.2 | 228.5 | 226.3 | 223.4 | 221.2 | 218.9 | 215.1 | 210.7 |
| 29 | 239.3 | 235.9 | 231.0 | 227.1 | 226.4 | 228.5 | 230.8 | 231.7 | 231.6 | 231.6 | 230.6 | 228.0 | 224.7 | 222.1 | 219.4 | 215.1 | 210.3 |
| 30 | 245.4 | 240.2 | 233.6 | 228.7 | 227.9 | 230.3 | 233.0 | 234.1 | 234.1 | 233.9 | 232.7 | 229.7 | 226.2 | 223.2 | 220.1 | 215.3 | 210.2 |
| 31 | 251.0 | 244.3 | 236.3 | 230.7 | 229.7 | 232.2 | 235.2 | 236.5 | 236.6 | 236.2 | 234.7 | 231.5 | 227.8 | 224.6 | 221.0 | 215.8 | 210.3 |
| 32 | 256.3 | 248.3 | 239.1 | 232.8 | 231.6 | 234.2 | 237.5 | 239.0 | 239.2 | 238.6 | 236.8 | 233.3 | 229.5 | 226.1 | 222.2 | 216.5 | 210.7 |
| 33 | 261.0 | 252.1 | 242.0 | 235.2 | 233.8 | 236.4 | 239.8 | 241.5 | 241.7 | 241.0 | 238.9 | 235.3 | 231.4 | 227.9 | 223.6 | 217.5 | 211.5 |
| 34 | 265.2 | 255.6 | 244.9 | 237.8 | 236.2 | 238.8 | 242.2 | 244.1 | 244.3 | 243.4 | 241.0 | 237.4 | 233.5 | 229.8 | 225.2 | 218.8 | 212.6 |
| 35 | 268.9 | 258.9 | 247.9 | 240.6 | 238.9 | 241.3 | 244.8 | 246.7 | 247.0 | 245.8 | 243.3 | 239.6 | 235.8 | 232.0 | 227.1 | 220.4 | 214.0 |
| 36 | 272.1 | 261.9 | 250.9 | 243.5 | 241.7 | 244.0 | 247.4 | 249.4 | 249.6 | 248.3 | 245.6 | 242.0 | 238.2 | 234.4 | 229.3 | 222.3 | 215.8 |
| 37 | 274.8 | 264.7 | 253.7 | 246.5 | 244.6 | 246.7 | 250.0 | 252.1 | 252.3 | 250.9 | 248.1 | 244.4 | 240.8 | 236.9 | 231.6 | 224.5 | 217.9 |
| 38 | 277.1 | 267.1 | 256.5 | 249.5 | 247.6 | 249.6 | 252.7 | 254.8 | 255.0 | 253.5 | 250.5 | 247.0 | 243.4 | 239.6 | 234.1 | 226.8 | 220.3 |
| 39 | 279.0 | 269.3 | 259.2 | 252.5 | 250.7 | 252.4 | 255.4 | 257.5 | 257.7 | 256.0 | 253.0 | 249.6 | 246.2 | 242.3 | 236.6 | 229.4 | 223.0 |
| 40 | 280.5 | 271.2 | 261.6 | 255.4 | 253.7 | 255.3 | 258.0 | 260.0 | 260.2 | 258.5 | 255.5 | 252.2 | 248.9 | 245.0 | 239.3 | 232.2 | 226.0 |
| 41 | 281.6 | 272.8 | 263.8 | 258.2 | 256.6 | 258.0 | 260.5 | 262.4 | 262.6 | 260.9 | 258.0 | 254.8 | 251.7 | 247.7 | 242.0 | 235.0 | 229.2 |
| 42 | 282.5 | 274.1 | 265.7 | 260.7 | 259.3 | 260.6 | 262.8 | 264.7 | 264.9 | 263.2 | 260.5 | 257.3 | 254.3 | 250.3 | 244.6 | 238.0 | 232.5 |
| 43 | 283.0 | 275.0 | 267.3 | 262.9 | 261.8 | 262.9 | 264.9 | 266.6 | 266.9 | 265.2 | 262.4 | 259.6 | 256.7 | 252.8 | 247.2 | 240.9 | 235.9 |
| 44 | 283.2 | 275.6 | 268.6 | 264.8 | 263.9 | 264.9 | 266.7 | 268.3 | 268.6 | 267.0 | 264.3 | 261.7 | 259.0 | 255.0 | 249.6 | 243.7 | 239.3 |
| 45 | 283.2 | 276.0 | 269.5 | 266.3 | 265.7 | 266.6 | 268.2 | 269.6 | 269.9 | 268.4 | 266.0 | 263.5 | 260.9 | 257.0 | 251.7 | 246.4 | 242.7 |
| 46 | 282.9 | 276.0 | 270.1 | 267.3 | 267.1 | 267.9 | 269.2 | 270.6 | 270.9 | 269.5 | 267.3 | 265.0 | 262.5 | 258.6 | 253.6 | 248.9 | 246.0 |
| 47 | 282.3 | 275.6 | 270.2 | 267.9 | 267.9 | 268.7 | 269.9 | 271.1 | 271.4 | 270.2 | 268.2 | 266.1 | 263.6 | 259.8 | 255.1 | 251.2 | 249.0 |
| 48 | 281.4 | 275.0 | 270.0 | 268.1 | 268.3 | 269.0 | 270.0 | 271.1 | 271.5 | 270.4 | 268.7 | 266.8 | 264.4 | 260.6 | 256.3 | 253.1 | 251.8 |
| 49 | 280.2 | 274.1 | 269.4 | 267.8 | 268.2 | 268.9 | 269.7 | 270.7 | 271.1 | 270.2 | 268.7 | 267.0 | 264.7 | 261.0 | 257.0 | 254.6 | 254.2 |
| 50 | 278.8 | 272.9 | 268.4 | 267.1 | 267.6 | 268.3 | 269.0 | 269.8 | 270.2 | 269.5 | 268.3 | 266.8 | 264.4 | 260.8 | 257.3 | 255.8 | 256.2 |
| 51 | 277.1 | 271.4 | 267.2 | 266.0 | 266.6 | 267.3 | 267.8 | 268.5 | 268.9 | 268.4 | 267.4 | 266.1 | 263.8 | 260.3 | 257.2 | 256.5 | 257.8 |
| 52 | 275.2 | 269.7 | 265.7 | 264.6 | 265.1 | 265.8 | 266.3 | 266.8 | 267.1 | 266.9 | 266.1 | 264.9 | 262.6 | 259.3 | 256.7 | 256.8 | 258.9 |
| 53 | 273.1 | 267.8 | 263.9 | 262.8 | 263.4 | 264.0 | 264.3 | 264.7 | 265.0 | 264.9 | 264.4 | 263.4 | 261.1 | 257.9 | 255.8 | 256.7 | 259.6 |
| 54 | 270.7 | 265.7 | 261.9 | 260.8 | 261.3 | 261.9 | 262.1 | 262.3 | 262.5 | 262.6 | 262.4 | 261.5 | 259.1 | 256.1 | 254.6 | 256.2 | 259.7 |
| 55 | 268.2 | 263.5 | 259.8 | 258.6 | 259.0 | 259.5 | 259.6 | 259.6 | 259.7 | 260.0 | 260.1 | 259.2 | 256.9 | 254.0 | 253.0 | 255.3 | 259.5 |
| 56 | 265.5 | 261.2 | 257.5 | 256.2 | 256.5 | 257.0 | 257.0 | 256.7 | 256.7 | 257.1 | 257.5 | 256.7 | 254.4 | 251.7 | 251.2 | 254.1 | 258.8 |
| 57 | 262.7 | 258.7 | 255.2 | 253.8 | 253.9 | 254.4 | 254.2 | 253.6 | 253.5 | 254.1 | 254.7 | 254.0 | 251.6 | 249.2 | 249.1 | 252.7 | 257.7 |
| 58 | 259.9 | 256.2 | 252.8 | 251.3 | 251.3 | 251.7 | 251.3 | 250.4 | 250.1 | 250.9 | 251.8 | 251.2 | 248.8 | 246.5 | 247.0 | 251.0 | 256.3 |
| 59 | 256.9 | 253.7 | 250.4 | 248.8 | 248.7 | 249.0 | 248.4 | 247.2 | 246.7 | 247.7 | 248.8 | 248.2 | 245.8 | 243.8 | 244.7 | 249.2 | 254.6 |
| 60 | 254.0 | 251.1 | 248.1 | 246.3 | 246.2 | 246.3 | 245.5 | 243.9 | 243.2 | 244.4 | 245.8 | 245.3 | 242.8 | 241.0 | 242.4 | 247.3 | 252.8 |
| 61 | 251.0 | 248.6 | 245.7 | 243.9 | 243.6 | 243.7 | 242.6 | 240.6 | 239.8 | 241.1 | 242.7 | 242.3 | 239.8 | 238.3 | 240.1 | 245.3 | 250.8 |
| 62 | 248.0 | 246.1 | 243.4 | 241.6 | 241.2 | 241.2 | 239.7 | 237.3 | 236.3 | 237.8 | 239.7 | 239.4 | 236.9 | 235.6 | 237.9 | 243.2 | 248.7 |
| 63 | 245.1 | 243.6 | 241.2 | 239.3 | 238.9 | 238.7 | 236.9 | 234.1 | 234.1 | 236.8 | 236.8 | 236.6 | 234.1 | 233.0 | 235.7 | 241.2 | 246.5 |
| 64 | 242.3 | 241.2 | 239.0 | 237.1 | 236.6 | 236.2 | 234.2 | 231.0 | 229.6 | 231.4 | 233.9 | 233.7 | 231.3 | 230.5 | 233.5 | 239.2 | 244.3 |
| 65 | 239.5 | 238.8 | 236.8 | 234.9 | 234.3 | 233.8 | 231.4 | 227.9 | 226.4 | 228.4 | 231.0 | 230.9 | 228.7 | 228.1 | 231.5 | 237.3 | 242.1 |
| 66 | 236.8 | 236.4 | 234.7 | 232.8 | 232.1 | 231.4 | 228.7 | 224.8 | 225.3 | 228.2 | 228.2 | 228.2 | 226.1 | 225.9 | 229.6 | 235.4 | 239.9 |
| 67 | 234.1 | 234.1 | 232.6 | 230.7 | 229.9 | 229.0 | 226.0 | 221.8 | 220.2 | 222.4 | 225.5 | 225.6 | 223.7 | 223.8 | 227.8 | 233.5 | 237.8 |
| 68 | 231.5 | 231.7 | 230.4 | 228.6 | 227.6 | 226.5 | 223.2 | 218.9 | 217.2 | 219.5 | 222.7 | 223.1 | 221.4 | 221.8 | 226.0 | 231.7 | 235.6 |
| 69 | 228.9 | 229.4 | 228.3 | 226.4 | 225.3 | 223.9 | 220.4 | 216.0 | 214.4 | 216.7 | 220.0 | 220.5 | 219.1 | 219.9 | 224.3 | 230.0 | 233.5 |
| 70 | 226.3 | 227.0 | 226.0 | 224.1 | 222.8 | 221.2 | 217.6 | 213.2 | 211.6 | 214.0 | 217.3 | 218.0 | 216.9 | 218.1 | 222.7 | 228.2 | 231.4 |
| 71 | 223.6 | 224.5 | 223.7 | 221.7 | 220.1 | 218.3 | 214.6 | 210.4 | 208.9 | 211.3 | 214.6 | 215.4 | 214.8 | 216.4 | 221.1 | 226.4 | 229.3 |
| 72 | 220.9 | 222.0 | 221.3 | 219.2 | 217.3 | 215.2 | 211.7 | 207.7 | 206.4 | 208.7 | 211.9 | 212.9 | 212.7 | 214.7 | 219.6 | 224.6 | 227.3 |
| 73 | 218.1 | 219.3 | 218.7 | 216.5 | 214.3 | 212.0 | 208.6 | 205.1 | 204.0 | 206.2 | 209.2 | 210.4 | 210.7 | 213.1 | 218.0 | 222.9 | 225.3 |
| 74 | 215.1 | 216.5 | 216.0 | 213.7 | 211.1 | 208.7 | 205.7 | 202.7 | 201.9 | 203.8 | 206.5 | 207.9 | 208.7 | 211.5 | 216.5 | 221.2 | 223.3 |
| 75 | 212.1 | 213.6 | 213.2 | 210.8 | 207.9 | 205.4 | 202.8 | 200.5 | 200.0 | 201.7 | 204.1 | 205.5 | 206.9 | 210.1 | 215.1 | 219.5 | 221.6 |
| 76 | 208.8 | 210.5 | 210.2 | 207.8 | 204.8 | 202.3 | 200.3 | 198.7 | 198.6 | 200.0 | 201.9 | 203.3 | 205.1 | 208.7 | 213.7 | 218.0 | 220.1 |
| 77 | 205.5 | 207.2 | 207.2 | 204.8 | 201.8 | 199.5 | 198.1 | 197.5 | 197.7 | 198.7 | 200.1 | 201.5 | 203.6 | 207.5 | 212.4 | 216.8 | 219.0 |
| 78 | 202.0 | 203.8 | 204.1 | 202.0 | 199.2 | 197.3 | 196.7 | 197.0 | 197.6 | 198.3 | 198.9 | 200.1 | 202.5 | 206.6 | 211.7 | 216.1 | 218.5 |
| 79 | 198.4 | 200.4 | 201.0 | 199.5 | 197.2 | 195.9 | 196.3 | 197.6 | 198.6 | 198.8 | 198.7 | 199.4 | 201.8 | 206.1 | 211.4 | 216.1 | 219.0 |
| 80 | 194.9 | 196.9 | 198.1 | 197.4 | 196.2 | 196.0 | 197.5 | 199.7 | 201.1 | 200.9 | 199.9 | 199.9 | 202.0 | 206.3 | 211.8 | 217.1 | 220.8 |

23

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 226.8 | 225.9 | 223.0 | 217.4 | 210.5 | 204.7 | 201.6 | 200.7 | 200.8 | 201.5 | 203.6 | 207.7 | 212.5 | 215.5 | 215.5 | 213.5 | 211.7 |
| 19 | 226.3 | 225.4 | 222.6 | 217.5 | 211.3 | 206.1 | 203.4 | 202.8 | 202.7 | 203.0 | 204.4 | 207.9 | 212.1 | 214.6 | 213.9 | 211.4 | 209.2 |
| 20 | 226.6 | 225.5 | 222.7 | 217.8 | 212.2 | 207.8 | 205.6 | 205.1 | 205.0 | 204.9 | 206.0 | 208.8 | 212.3 | 214.0 | 212.8 | 209.7 | 207.0 |
| 21 | 227.6 | 226.3 | 223.2 | 218.4 | 213.3 | 209.7 | 208.1 | 207.7 | 207.4 | 207.2 | 208.0 | 210.1 | 212.7 | 213.6 | 211.9 | 208.3 | 205.0 |
| 22 | 229.0 | 227.5 | 224.0 | 219.1 | 214.6 | 211.7 | 210.6 | 210.4 | 210.1 | 209.8 | 210.3 | 211.7 | 213.3 | 213.4 | 211.2 | 207.1 | 203.3 |
| 23 | 230.8 | 229.1 | 225.2 | 220.2 | 216.0 | 213.9 | 213.3 | 213.1 | 212.8 | 212.6 | 212.8 | 213.5 | 214.0 | 213.3 | 210.6 | 206.1 | 201.8 |
| 24 | 232.9 | 230.9 | 226.7 | 221.5 | 217.7 | 216.1 | 216.0 | 216.0 | 215.7 | 215.5 | 215.3 | 214.8 | 213.3 | 210.2 | 205.3 | 200.7 | |
| 25 | 235.2 | 233.0 | 228.4 | 223.1 | 219.5 | 218.5 | 218.8 | 218.8 | 218.6 | 218.4 | 218.1 | 217.2 | 215.6 | 213.4 | 209.9 | 204.8 | 199.8 |
| 26 | 237.7 | 235.3 | 230.4 | 224.9 | 221.5 | 220.9 | 221.5 | 221.7 | 221.5 | 221.4 | 220.8 | 219.1 | 216.6 | 213.6 | 209.7 | 204.4 | 199.3 |
| 27 | 240.3 | 237.7 | 232.6 | 227.0 | 223.8 | 223.4 | 224.2 | 224.6 | 224.5 | 224.4 | 223.5 | 221.0 | 217.6 | 214.0 | 209.8 | 204.4 | 199.1 |
| 28 | 243.0 | 240.3 | 235.0 | 229.4 | 226.2 | 226.0 | 227.0 | 227.4 | 227.5 | 227.4 | 226.2 | 223.0 | 218.7 | 214.6 | 210.1 | 204.6 | 199.3 |
| 29 | 245.8 | 242.9 | 237.6 | 232.0 | 228.9 | 228.7 | 229.7 | 230.3 | 230.5 | 230.4 | 228.8 | 225.0 | 220.0 | 215.3 | 210.6 | 205.1 | 199.9 |
| 30 | 248.6 | 245.6 | 240.3 | 234.8 | 231.7 | 231.5 | 232.5 | 233.1 | 233.4 | 233.3 | 231.4 | 227.0 | 221.5 | 216.3 | 211.4 | 205.9 | 200.9 |
| 31 | 251.4 | 248.4 | 243.2 | 237.8 | 234.7 | 234.4 | 235.3 | 236.0 | 236.4 | 236.2 | 234.0 | 229.2 | 223.1 | 217.5 | 212.5 | 207.1 | 202.3 |
| 32 | 254.1 | 251.2 | 246.1 | 240.9 | 237.9 | 237.4 | 238.1 | 238.8 | 239.3 | 239.1 | 236.6 | 231.4 | 224.9 | 219.0 | 213.8 | 208.6 | 204.0 |
| 33 | 256.9 | 254.0 | 249.2 | 244.2 | 241.2 | 240.5 | 241.0 | 241.6 | 242.2 | 241.9 | 239.2 | 233.7 | 226.9 | 220.8 | 215.5 | 210.4 | 206.2 |
| 34 | 259.7 | 256.8 | 252.2 | 247.6 | 244.5 | 243.6 | 243.9 | 244.5 | 245.0 | 244.6 | 241.8 | 236.1 | 229.1 | 222.8 | 217.4 | 212.6 | 208.7 |
| 35 | 262.4 | 259.6 | 255.3 | 250.9 | 248.0 | 246.8 | 246.8 | 247.2 | 247.8 | 247.3 | 244.4 | 238.6 | 231.5 | 225.1 | 219.7 | 215.1 | 211.5 |
| 36 | 265.0 | 262.3 | 258.4 | 254.3 | 251.4 | 250.0 | 249.7 | 250.0 | 250.5 | 250.0 | 247.0 | 241.2 | 234.1 | 227.6 | 222.2 | 217.9 | 214.7 |
| 37 | 267.5 | 265.0 | 261.4 | 257.7 | 254.9 | 253.2 | 252.5 | 252.6 | 253.0 | 252.5 | 249.5 | 243.8 | 236.8 | 230.2 | 225.0 | 220.9 | 218.2 |
| 38 | 270.0 | 267.5 | 264.2 | 260.9 | 258.2 | 256.3 | 255.3 | 255.2 | 255.0 | 255.0 | 252.1 | 246.5 | 239.6 | 233.1 | 227.9 | 224.2 | 221.9 |
| 39 | 272.3 | 270.0 | 267.0 | 264.0 | 261.4 | 259.3 | 258.1 | 257.7 | 257.9 | 257.3 | 254.5 | 249.2 | 242.5 | 236.0 | 231.0 | 227.7 | 225.8 |
| 40 | 274.5 | 272.3 | 269.5 | 266.9 | 264.4 | 262.2 | 260.6 | 260.0 | 260.0 | 259.5 | 256.9 | 251.8 | 245.3 | 239.1 | 234.3 | 231.3 | 229.9 |
| 41 | 276.5 | 274.4 | 271.9 | 269.5 | 267.2 | 264.9 | 263.0 | 262.2 | 262.0 | 261.5 | 259.1 | 254.4 | 248.1 | 242.1 | 237.5 | 235.0 | 234.0 |
| 42 | 278.4 | 276.3 | 273.9 | 271.8 | 269.6 | 267.3 | 265.2 | 264.1 | 263.8 | 263.3 | 261.2 | 256.8 | 250.8 | 245.0 | 240.8 | 238.7 | 238.1 |
| 43 | 280.0 | 277.9 | 275.7 | 273.8 | 271.8 | 269.4 | 267.1 | 265.8 | 265.4 | 265.0 | 263.1 | 259.0 | 253.4 | 247.8 | 244.0 | 242.3 | 242.2 |
| 44 | 281.4 | 279.3 | 277.2 | 275.4 | 273.5 | 271.1 | 268.7 | 267.2 | 266.7 | 266.3 | 264.7 | 260.9 | 255.6 | 250.4 | 247.0 | 245.8 | 246.1 |
| 45 | 282.5 | 280.4 | 278.3 | 276.6 | 274.8 | 272.5 | 270.0 | 268.2 | 267.7 | 267.4 | 266.0 | 262.6 | 257.6 | 252.8 | 249.7 | 249.0 | 249.7 |
| 46 | 283.4 | 281.2 | 279.1 | 277.4 | 275.7 | 273.4 | 270.8 | 269.0 | 268.4 | 268.2 | 267.1 | 263.9 | 259.2 | 254.7 | 252.2 | 252.0 | 253.0 |
| 47 | 283.9 | 281.6 | 279.4 | 277.8 | 276.2 | 273.9 | 271.3 | 269.4 | 268.8 | 268.7 | 267.7 | 264.8 | 260.4 | 256.4 | 254.3 | 254.6 | 256.0 |
| 48 | 284.1 | 281.7 | 279.4 | 277.7 | 276.1 | 273.9 | 271.4 | 269.4 | 268.8 | 268.9 | 268.0 | 265.3 | 261.2 | 257.5 | 256.0 | 256.7 | 258.4 |
| 49 | 284.0 | 281.5 | 279.0 | 277.2 | 275.7 | 273.6 | 271.0 | 269.1 | 268.5 | 268.7 | 267.9 | 265.3 | 261.5 | 258.3 | 257.2 | 258.4 | 260.4 |
| 50 | 283.6 | 280.9 | 278.2 | 276.3 | 274.8 | 272.7 | 270.3 | 268.4 | 267.9 | 268.1 | 267.4 | 264.9 | 261.3 | 258.6 | 258.0 | 259.6 | 261.7 |
| 51 | 282.8 | 279.9 | 277.0 | 275.0 | 273.5 | 271.5 | 269.2 | 267.4 | 266.9 | 267.2 | 266.6 | 264.1 | 260.7 | 258.4 | 258.3 | 260.3 | 262.6 |
| 52 | 281.7 | 278.6 | 275.5 | 273.4 | 271.8 | 269.9 | 267.7 | 266.0 | 265.6 | 266.0 | 265.3 | 262.9 | 259.7 | 257.8 | 258.2 | 260.4 | 262.8 |
| 53 | 280.2 | 277.0 | 273.7 | 271.4 | 269.8 | 268.0 | 265.9 | 264.3 | 264.0 | 264.4 | 263.8 | 261.3 | 258.3 | 256.8 | 257.6 | 260.1 | 262.6 |
| 54 | 278.4 | 275.0 | 271.5 | 269.1 | 267.5 | 265.8 | 263.8 | 262.3 | 262.1 | 262.5 | 261.8 | 259.4 | 256.6 | 255.4 | 256.6 | 259.4 | 261.8 |
| 55 | 276.3 | 272.8 | 269.1 | 266.6 | 265.0 | 263.4 | 261.4 | 260.0 | 259.9 | 260.3 | 259.7 | 257.3 | 254.6 | 253.8 | 255.3 | 258.2 | 260.6 |
| 56 | 273.9 | 270.3 | 266.5 | 263.8 | 262.2 | 260.7 | 258.9 | 257.5 | 257.4 | 257.9 | 257.2 | 254.9 | 252.4 | 251.9 | 253.8 | 256.7 | 259.0 |
| 57 | 271.3 | 267.6 | 263.7 | 260.9 | 259.3 | 258.0 | 256.2 | 254.8 | 254.7 | 255.2 | 254.6 | 252.3 | 250.0 | 249.8 | 252.0 | 255.0 | 257.1 |
| 58 | 268.4 | 264.7 | 260.7 | 257.8 | 256.3 | 255.1 | 253.4 | 252.0 | 251.8 | 252.3 | 251.7 | 249.6 | 247.5 | 247.6 | 250.0 | 253.0 | 255.0 |
| 59 | 265.3 | 261.6 | 257.6 | 254.7 | 253.2 | 252.1 | 250.5 | 249.0 | 248.7 | 249.2 | 248.8 | 246.8 | 245.0 | 245.4 | 248.0 | 251.0 | 252.7 |
| 60 | 262.1 | 258.4 | 254.3 | 251.4 | 250.0 | 249.1 | 247.5 | 245.9 | 245.5 | 246.0 | 245.8 | 244.1 | 242.5 | 243.1 | 245.9 | 248.8 | 250.3 |
| 61 | 258.7 | 255.2 | 251.0 | 248.1 | 246.8 | 246.0 | 244.5 | 242.7 | 242.1 | 242.6 | 242.7 | 241.3 | 240.0 | 240.9 | 243.8 | 246.6 | 247.9 |
| 62 | 255.2 | 251.8 | 247.7 | 244.8 | 243.6 | 243.0 | 241.5 | 239.5 | 238.7 | 239.2 | 239.5 | 238.5 | 237.6 | 238.7 | 241.8 | 244.5 | 245.5 |
| 63 | 251.6 | 248.4 | 244.3 | 241.4 | 240.3 | 239.9 | 238.4 | 236.3 | 235.2 | 235.8 | 236.4 | 235.8 | 235.2 | 236.6 | 239.8 | 242.4 | 243.1 |
| 64 | 247.9 | 244.9 | 241.0 | 238.0 | 237.1 | 236.8 | 235.4 | 233.0 | 231.7 | 232.3 | 233.3 | 233.0 | 233.0 | 234.7 | 237.9 | 240.4 | 240.8 |
| 65 | 244.2 | 241.4 | 237.6 | 234.7 | 233.8 | 233.8 | 232.3 | 229.7 | 228.1 | 228.8 | 230.2 | 230.5 | 230.8 | 232.8 | 236.2 | 238.5 | 238.7 |
| 66 | 240.4 | 237.9 | 234.3 | 231.4 | 230.6 | 230.6 | 229.2 | 226.4 | 224.6 | 225.3 | 227.1 | 228.0 | 228.7 | 231.0 | 234.5 | 236.7 | 236.6 |
| 67 | 236.6 | 234.4 | 230.9 | 228.0 | 227.3 | 227.5 | 226.2 | 223.2 | 221.2 | 221.9 | 224.1 | 225.5 | 226.7 | 229.3 | 232.9 | 235.0 | 234.7 |
| 68 | 232.7 | 230.9 | 227.6 | 224.7 | 224.0 | 224.3 | 223.0 | 219.9 | 217.8 | 218.6 | 221.1 | 223.1 | 224.8 | 227.7 | 231.4 | 233.4 | 232.9 |
| 69 | 228.8 | 227.3 | 224.2 | 221.4 | 220.7 | 221.1 | 219.9 | 216.8 | 214.6 | 215.4 | 218.2 | 220.7 | 222.8 | 226.1 | 229.9 | 231.9 | 231.3 |
| 70 | 224.8 | 223.7 | 220.9 | 218.1 | 217.4 | 217.8 | 216.7 | 213.7 | 211.5 | 212.4 | 215.3 | 218.3 | 220.9 | 224.5 | 228.5 | 230.5 | 229.8 |
| 71 | 220.7 | 220.0 | 217.5 | 214.8 | 214.0 | 214.5 | 213.5 | 210.7 | 208.6 | 209.5 | 212.6 | 215.9 | 219.0 | 222.9 | 227.1 | 229.1 | 228.4 |
| 72 | 216.6 | 216.3 | 214.1 | 211.6 | 210.7 | 211.1 | 210.4 | 207.9 | 205.9 | 206.8 | 209.9 | 213.5 | 217.0 | 221.3 | 225.6 | 227.7 | 227.1 |
| 73 | 212.4 | 212.4 | 210.7 | 208.3 | 207.3 | 207.7 | 207.3 | 205.2 | 203.5 | 204.2 | 207.4 | 211.1 | 215.1 | 219.7 | 224.1 | 226.3 | 225.9 |
| 74 | 208.0 | 208.4 | 207.1 | 205.0 | 204.0 | 204.4 | 204.3 | 202.8 | 201.5 | 202.2 | 205.1 | 208.9 | 213.1 | 218.0 | 222.7 | 225.0 | 224.8 |
| 75 | 203.4 | 204.2 | 203.4 | 201.6 | 200.7 | 201.2 | 201.5 | 200.7 | 199.9 | 200.5 | 203.0 | 206.7 | 211.2 | 216.4 | 221.2 | 223.8 | 223.9 |
| 76 | 198.7 | 199.7 | 199.5 | 198.3 | 197.6 | 198.2 | 199.0 | 199.1 | 198.7 | 199.3 | 201.3 | 204.7 | 209.4 | 214.9 | 219.8 | 222.7 | 223.2 |
| 77 | 193.7 | 195.1 | 195.5 | 194.9 | 194.6 | 195.5 | 197.0 | 198.0 | 198.2 | 198.6 | 200.1 | 203.1 | 207.9 | 213.5 | 218.7 | 221.8 | 222.8 |
| 78 | 188.5 | 190.2 | 191.3 | 191.5 | 191.9 | 193.4 | 195.7 | 197.7 | 198.5 | 198.7 | 199.5 | 202.1 | 206.7 | 212.6 | 217.9 | 221.3 | 222.8 |
| 79 | 183.0 | 184.9 | 186.8 | 188.2 | 189.6 | 191.9 | 195.3 | 198.4 | 199.8 | 199.7 | 199.7 | 201.8 | 206.3 | 212.3 | 217.8 | 221.5 | 223.3 |
| 80 | 177.3 | 179.4 | 182.1 | 184.8 | 187.7 | 191.5 | 196.2 | 200.3 | 202.3 | 201.9 | 201.2 | 202.6 | 206.9 | 212.9 | 218.6 | 222.7 | 224.8 |

DECEMBER                                          ZONAL MEAN TEMPERATURE (K)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 232.7 | 230.4 | 225.5 | 218.0 | 209.6 | 203.0 | 199.9 | 199.6 | 200.4 | 201.2 | 202.9 | 206.8 | 211.8 | 214.8 | 213.0 | 207.6 | 202.2 |
| 19 | 233.0 | 230.6 | 225.8 | 218.7 | 211.2 | 205.4 | 202.6 | 202.3 | 202.5 | 202.6 | 203.7 | 206.9 | 211.3 | 213.8 | 211.4 | 205.1 | 199.0 |
| 20 | 233.6 | 231.1 | 226.3 | 219.6 | 212.8 | 207.7 | 205.3 | 204.8 | 204.7 | 204.4 | 205.0 | 207.7 | 211.6 | 213.5 | 210.4 | 203.3 | 196.4 |
| 21 | 234.5 | 231.8 | 227.1 | 220.7 | 214.4 | 210.0 | 207.9 | 207.4 | 207.0 | 206.5 | 206.8 | 209.0 | 212.4 | 213.6 | 209.9 | 202.0 | 194.5 |
| 22 | 235.5 | 232.8 | 228.1 | 222.0 | 216.2 | 212.3 | 210.4 | 209.9 | 209.4 | 208.7 | 208.9 | 210.7 | 213.4 | 214.0 | 209.6 | 201.2 | 193.3 |
| 23 | 236.7 | 234.0 | 229.4 | 223.5 | 218.2 | 214.6 | 213.0 | 212.5 | 211.9 | 211.2 | 211.2 | 212.6 | 214.6 | 214.4 | 209.5 | 200.8 | 192.6 |
| 24 | 238.1 | 235.5 | 230.9 | 225.3 | 220.3 | 217.1 | 215.6 | 215.0 | 214.5 | 213.9 | 213.7 | 214.7 | 215.8 | 214.9 | 209.5 | 200.7 | 192.6 |
| 25 | 239.6 | 237.1 | 232.6 | 227.2 | 222.5 | 219.6 | 218.2 | 217.6 | 217.2 | 216.6 | 216.4 | 216.8 | 217.1 | 215.3 | 209.6 | 200.9 | 193.0 |
| 26 | 241.3 | 238.9 | 234.6 | 229.4 | 225.0 | 222.2 | 220.9 | 220.3 | 219.9 | 219.5 | 219.2 | 219.0 | 218.4 | 215.8 | 209.8 | 201.4 | 193.9 |
| 27 | 243.2 | 240.8 | 236.7 | 231.8 | 227.6 | 224.9 | 223.6 | 223.0 | 222.7 | 222.4 | 222.0 | 221.3 | 219.7 | 216.3 | 210.1 | 202.1 | 195.3 |
| 28 | 245.1 | 243.0 | 239.1 | 234.4 | 230.3 | 227.7 | 226.4 | 225.7 | 225.5 | 225.4 | 224.9 | 223.6 | 221.1 | 216.8 | 210.6 | 203.2 | 197.0 |
| 29 | 247.2 | 245.2 | 241.6 | 237.1 | 233.2 | 230.6 | 229.2 | 228.5 | 228.4 | 228.4 | 227.8 | 226.0 | 222.5 | 217.4 | 211.2 | 204.5 | 199.1 |
| 30 | 249.4 | 247.6 | 244.2 | 240.0 | 236.1 | 233.5 | 232.0 | 231.3 | 231.2 | 231.4 | 230.8 | 228.4 | 224.0 | 218.2 | 211.9 | 206.0 | 201.6 |
| 31 | 251.7 | 250.1 | 247.0 | 242.9 | 239.2 | 236.6 | 234.9 | 234.1 | 234.0 | 234.4 | 233.7 | 230.8 | 225.6 | 219.2 | 212.9 | 207.8 | 204.3 |
| 32 | 254.1 | 252.7 | 249.8 | 246.0 | 242.4 | 239.6 | 237.8 | 236.9 | 236.9 | 237.3 | 236.6 | 233.3 | 227.3 | 220.3 | 214.2 | 209.8 | 207.2 |
| 33 | 256.5 | 255.4 | 252.7 | 249.1 | 245.6 | 242.7 | 240.8 | 239.6 | 239.6 | 240.2 | 239.5 | 235.9 | 229.2 | 221.7 | 215.6 | 212.0 | 210.4 |
| 34 | 259.1 | 258.1 | 255.7 | 252.3 | 248.7 | 245.8 | 243.7 | 242.4 | 242.3 | 243.0 | 242.4 | 238.5 | 231.3 | 223.3 | 217.3 | 214.4 | 213.7 |
| 35 | 261.6 | 260.8 | 258.6 | 255.4 | 251.9 | 248.9 | 246.6 | 245.1 | 245.0 | 245.7 | 245.2 | 241.2 | 233.5 | 225.2 | 219.3 | 217.0 | 217.2 |
| 36 | 264.2 | 263.5 | 261.6 | 258.5 | 255.0 | 251.9 | 249.4 | 247.7 | 247.5 | 248.3 | 248.0 | 243.9 | 235.9 | 227.3 | 221.5 | 219.8 | 220.7 |
| 37 | 266.8 | 266.2 | 264.4 | 261.4 | 258.1 | 254.9 | 252.1 | 250.3 | 250.0 | 250.8 | 250.6 | 246.5 | 238.4 | 229.6 | 223.9 | 222.7 | 224.3 |
| 38 | 269.4 | 268.9 | 267.2 | 264.3 | 261.0 | 257.7 | 254.8 | 252.7 | 252.3 | 253.2 | 253.2 | 249.2 | 241.0 | 232.0 | 226.5 | 225.8 | 227.9 |
| 39 | 271.9 | 271.5 | 269.9 | 267.0 | 263.7 | 260.4 | 257.3 | 255.1 | 254.5 | 255.5 | 255.6 | 251.8 | 243.6 | 234.7 | 229.2 | 228.9 | 231.5 |
| 40 | 274.4 | 274.0 | 272.4 | 269.6 | 266.3 | 262.9 | 259.7 | 257.2 | 256.6 | 257.6 | 257.9 | 254.3 | 246.3 | 237.4 | 232.1 | 232.0 | 235.0 |
| 41 | 276.7 | 276.3 | 274.7 | 271.9 | 268.6 | 265.2 | 261.9 | 259.3 | 258.5 | 259.5 | 260.0 | 256.7 | 248.8 | 240.1 | 235.1 | 235.2 | 238.4 |
| 42 | 279.0 | 278.5 | 276.7 | 273.9 | 270.7 | 267.3 | 263.9 | 261.1 | 260.2 | 261.2 | 261.9 | 258.8 | 251.3 | 242.9 | 238.0 | 238.4 | 241.6 |
| 43 | 281.0 | 280.4 | 278.6 | 275.7 | 272.5 | 269.2 | 265.7 | 262.8 | 261.8 | 262.8 | 263.6 | 260.8 | 253.5 | 245.5 | 240.9 | 241.4 | 244.7 |
| 44 | 282.9 | 282.1 | 280.1 | 277.2 | 274.0 | 270.7 | 267.2 | 264.2 | 263.1 | 264.2 | 265.0 | 262.4 | 255.5 | 247.9 | 243.7 | 244.4 | 247.6 |
| 45 | 284.5 | 283.6 | 281.4 | 278.3 | 275.1 | 271.9 | 268.5 | 265.5 | 264.3 | 265.3 | 266.2 | 263.7 | 257.2 | 250.1 | 246.4 | 247.1 | 250.2 |
| 46 | 285.9 | 284.8 | 282.4 | 279.1 | 276.0 | 272.9 | 269.5 | 266.4 | 265.3 | 266.2 | 267.1 | 264.6 | 258.5 | 252.0 | 248.8 | 249.7 | 252.6 |
| 47 | 287.0 | 285.7 | 283.0 | 279.6 | 276.4 | 273.4 | 270.1 | 267.2 | 266.0 | 266.9 | 267.6 | 265.1 | 259.3 | 253.5 | 250.9 | 252.0 | 254.7 |
| 48 | 287.8 | 286.2 | 283.2 | 279.7 | 276.6 | 273.7 | 270.5 | 267.6 | 266.5 | 267.4 | 267.9 | 265.2 | 259.7 | 254.6 | 252.7 | 254.0 | 256.5 |
| 49 | 288.3 | 286.4 | 283.1 | 279.4 | 276.3 | 273.6 | 270.5 | 267.8 | 266.8 | 267.6 | 267.8 | 264.9 | 259.7 | 255.3 | 254.1 | 255.4 | 258.0 |
| 50 | 288.4 | 286.3 | 282.7 | 278.8 | 275.7 | 273.1 | 270.2 | 267.7 | 266.8 | 267.6 | 267.4 | 264.2 | 259.2 | 255.5 | 255.1 | 257.0 | 259.1 |
| 51 | 288.2 | 285.8 | 281.9 | 277.8 | 274.7 | 272.3 | 269.6 | 267.3 | 266.6 | 267.2 | 266.7 | 263.1 | 258.2 | 255.3 | 255.6 | 257.9 | 260.0 |
| 52 | 287.5 | 284.9 | 280.7 | 276.5 | 273.4 | 271.1 | 268.6 | 266.6 | 266.1 | 266.6 | 265.7 | 261.7 | 256.9 | 254.7 | 255.8 | 258.5 | 260.5 |
| 53 | 286.5 | 283.7 | 279.2 | 274.8 | 271.8 | 269.6 | 267.4 | 265.5 | 265.3 | 265.7 | 264.3 | 259.9 | 255.2 | 253.6 | 255.6 | 258.7 | 260.6 |
| 54 | 285.2 | 282.1 | 277.4 | 272.9 | 269.8 | 267.7 | 265.7 | 264.2 | 264.2 | 264.6 | 262.7 | 257.9 | 253.2 | 252.3 | 255.0 | 258.6 | 260.4 |
| 55 | 283.4 | 280.1 | 275.3 | 270.6 | 267.5 | 265.6 | 263.8 | 262.6 | 262.8 | 263.1 | 260.9 | 255.6 | 251.0 | 250.4 | 254.1 | 258.1 | 259.9 |
| 56 | 281.3 | 277.9 | 272.8 | 268.0 | 264.9 | 263.1 | 261.6 | 260.7 | 261.1 | 261.4 | 258.8 | 253.2 | 248.6 | 248.7 | 252.9 | 257.3 | 259.1 |
| 57 | 278.8 | 275.3 | 270.1 | 265.2 | 262.1 | 260.4 | 259.2 | 258.5 | 259.1 | 259.3 | 256.4 | 250.6 | 246.2 | 246.7 | 251.5 | 256.2 | 258.0 |
| 58 | 276.0 | 272.4 | 267.1 | 262.1 | 259.0 | 257.5 | 256.4 | 256.1 | 256.8 | 257.0 | 253.8 | 247.9 | 243.6 | 244.7 | 249.9 | 254.9 | 256.6 |
| 59 | 272.9 | 269.3 | 263.9 | 258.9 | 255.8 | 254.3 | 253.5 | 253.4 | 254.2 | 254.4 | 251.2 | 245.2 | 241.1 | 242.6 | 248.2 | 253.3 | 255.0 |
| 60 | 269.6 | 265.9 | 260.5 | 255.4 | 252.3 | 251.0 | 250.3 | 250.4 | 251.4 | 251.6 | 248.3 | 242.5 | 238.7 | 240.5 | 246.4 | 251.6 | 253.2 |
| 61 | 265.9 | 262.3 | 256.9 | 251.8 | 248.7 | 247.4 | 247.0 | 247.3 | 248.3 | 248.5 | 245.6 | 239.8 | 236.4 | 238.5 | 244.6 | 249.8 | 251.3 |
| 62 | 262.0 | 258.5 | 253.1 | 248.0 | 244.9 | 243.8 | 243.6 | 243.9 | 245.0 | 245.2 | 242.3 | 237.1 | 234.2 | 236.6 | 242.8 | 247.8 | 249.2 |
| 63 | 257.9 | 254.5 | 249.2 | 244.1 | 241.0 | 240.1 | 240.0 | 240.4 | 241.5 | 241.7 | 239.1 | 234.5 | 232.1 | 234.8 | 241.0 | 245.8 | 246.9 |
| 64 | 253.6 | 250.3 | 245.1 | 240.1 | 237.1 | 236.3 | 236.3 | 236.8 | 237.8 | 238.0 | 235.8 | 231.9 | 230.2 | 233.2 | 239.2 | 243.8 | 244.7 |
| 65 | 249.1 | 246.0 | 240.9 | 236.0 | 233.1 | 232.4 | 232.7 | 233.2 | 234.0 | 234.2 | 232.5 | 229.4 | 228.4 | 231.6 | 237.6 | 241.8 | 242.4 |
| 66 | 244.4 | 241.5 | 236.7 | 231.8 | 229.1 | 228.5 | 228.9 | 229.4 | 230.1 | 230.3 | 229.1 | 226.9 | 226.7 | 230.2 | 236.0 | 239.8 | 240.1 |
| 67 | 239.7 | 236.9 | 232.3 | 227.7 | 225.1 | 224.7 | 225.3 | 225.7 | 226.2 | 226.4 | 225.7 | 224.5 | 225.1 | 228.9 | 234.4 | 237.8 | 238.0 |
| 68 | 234.8 | 232.3 | 227.9 | 223.5 | 221.0 | 220.9 | 221.6 | 222.0 | 222.2 | 222.5 | 222.3 | 222.1 | 223.5 | 227.6 | 232.9 | 235.9 | 235.9 |
| 69 | 229.7 | 227.5 | 223.4 | 219.3 | 217.1 | 217.2 | 218.1 | 218.4 | 218.4 | 218.6 | 218.9 | 219.7 | 222.0 | 226.4 | 231.4 | 234.0 | 233.9 |
| 70 | 224.6 | 222.6 | 218.9 | 215.1 | 213.2 | 213.6 | 214.6 | 214.9 | 214.6 | 214.8 | 215.6 | 217.3 | 220.4 | 225.1 | 229.8 | 232.3 | 232.1 |
| 71 | 219.4 | 217.7 | 214.3 | 210.9 | 209.4 | 210.1 | 211.3 | 211.6 | 211.1 | 211.1 | 212.4 | 214.9 | 218.7 | 223.7 | 228.3 | 230.6 | 230.5 |
| 72 | 214.4 | 212.6 | 209.7 | 206.8 | 205.7 | 206.8 | 208.2 | 208.4 | 207.2 | 207.7 | 209.2 | 212.5 | 217.0 | 222.2 | 226.8 | 229.0 | 229.2 |
| 73 | 208.6 | 207.5 | 205.1 | 202.7 | 202.1 | 203.6 | 205.3 | 205.6 | 204.7 | 204.5 | 206.3 | 210.1 | 215.2 | 220.7 | 225.2 | 227.6 | 228.0 |
| 74 | 203.1 | 202.2 | 200.4 | 198.6 | 198.7 | 200.6 | 202.7 | 203.0 | 202.0 | 201.7 | 203.5 | 207.7 | 213.3 | 219.0 | 223.5 | 226.2 | 227.1 |
| 75 | 197.5 | 196.9 | 195.6 | 194.7 | 195.4 | 197.9 | 200.3 | 200.8 | 199.8 | 199.3 | 201.1 | 205.5 | 211.4 | 217.3 | 222.0 | 225.0 | 226.4 |
| 76 | 191.8 | 191.5 | 190.9 | 190.8 | 192.3 | 195.5 | 198.3 | 199.1 | 198.1 | 197.4 | 199.1 | 203.5 | 209.6 | 215.6 | 220.5 | 223.9 | 226.0 |
| 77 | 186.0 | 185.9 | 186.0 | 187.0 | 189.5 | 193.2 | 196.6 | 197.8 | 197.0 | 196.2 | 197.6 | 201.9 | 208.0 | 214.1 | 219.2 | 223.0 | 225.6 |
| 78 | 180.1 | 180.3 | 181.2 | 183.2 | 186.8 | 191.4 | 195.4 | 197.1 | 196.6 | 195.7 | 196.8 | 200.8 | 206.9 | 213.1 | 218.3 | 222.4 | 225.3 |
| 79 | 174.1 | 174.6 | 176.2 | 179.5 | 184.3 | 189.8 | 194.6 | 197.1 | 197.1 | 196.2 | 196.8 | 200.5 | 206.5 | 212.8 | 218.1 | 222.1 | 225.0 |
| 80 | 168.0 | 168.7 | 171.3 | 175.9 | 182.1 | 188.7 | 194.4 | 197.9 | 198.7 | 197.8 | 198.0 | 201.3 | 207.3 | 213.8 | 218.9 | 222.3 | 224.5 |

25

JANUARY                          ZONAL MEAN PRESSURE (MB)


| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 7.455 | 7.465 | 7.523 | 7.639 | 7.766 | 7.840 | 7.841 | 7.813 | 7.810 | 7.815 | 7.758 | 7.593 | 7.348 | 7.083 | 6.827 | 6.590 | 6.408 | + 1 |
| 19 | 6.439 | 6.443 | 6.479 | 6.550 | 6.624 | 6.657 | 6.641 | 6.613 | 6.608 | 6.614 | 6.576 | 6.458 | 6.272 | 6.053 | 5.818 | 5.585 | 5.402 | |
| 20 | 5.563 | 5.563 | 5.582 | 5.621 | 5.658 | 5.664 | 5.638 | 5.608 | 5.601 | 5.604 | 5.579 | 5.495 | 5.355 | 5.172 | 4.956 | 4.729 | 4.547 | |
| 21 | 4.808 | 4.805 | 4.812 | 4.828 | 4.839 | 4.828 | 4.796 | 4.765 | 4.755 | 4.756 | 4.739 | 4.681 | 4.575 | 4.422 | 4.223 | 4.003 | 3.825 | |
| 22 | 4.158 | 4.153 | 4.151 | 4.151 | 4.145 | 4.122 | 4.087 | 4.056 | 4.044 | 4.043 | 4.032 | 3.992 | 3.913 | 3.783 | 3.600 | 3.390 | 3.219 | |
| 23 | 3.599 | 3.592 | 3.584 | 3.573 | 3.556 | 3.526 | 3.489 | 3.459 | 3.446 | 3.443 | 3.437 | 3.410 | 3.350 | 3.239 | 3.071 | 2.874 | 2.712 | |
| 24 | 3.117 | 3.109 | 3.097 | 3.079 | 3.054 | 3.020 | 2.983 | 2.955 | 2.941 | 2.939 | 2.935 | 2.918 | 2.871 | 2.776 | 2.623 | 2.440 | 2.289 | |
| 25 | 2.703 | 2.694 | 2.679 | 2.657 | 2.627 | 2.591 | 2.555 | 2.528 | 2.515 | 2.513 | 2.511 | 2.500 | 2.464 | 2.381 | 2.243 | 2.074 | 1.935 | |
| 26 | 2.346 | 2.337 | 2.320 | 2.295 | 2.263 | 2.227 | 2.192 | 2.167 | 2.155 | 2.153 | 2.153 | 2.145 | 2.116 | 2.044 | 1.920 | 1.767 | 1.640 | |
| 27 | 2.038 | 2.029 | 2.012 | 1.986 | 1.952 | 1.916 | 1.884 | 1.861 | 1.850 | 1.848 | 1.848 | 1.843 | 1.819 | 1.757 | 1.645 | 1.507 | 1.394 | |
| 28 | 1.772 | 1.764 | 1.747 | 1.720 | 1.687 | 1.652 | 1.621 | 1.600 | 1.590 | 1.589 | 1.590 | 1.586 | 1.566 | 1.511 | 1.412 | 1.289 | 1.187 | |
| 29 | 1.543 | 1.535 | 1.519 | 1.492 | 1.460 | 1.426 | 1.397 | 1.378 | 1.370 | 1.369 | 1.370 | 1.366 | 1.348 | 1.300 | 1.213 | 1.104 | 1.014 | |
| 30 | 1.345 | 1.338 | 1.322 | 1.296 | 1.265 | 1.233 | 1.207 | 1.189 | 1.181 | 1.181 | 1.182 | 1.179 | 1.163 | 1.120 | 1.043 | 0.947 | 0.868 | |
| 31 | 1.174 | 1.167 | 1.152 | 1.128 | 1.098 | 1.068 | 1.043 | 1.027 | 1.021 | 1.021 | 1.022 | 1.018 | 1.003 | 0.966 | 0.898 | 0.815 | 0.745 | |
| 32 | 1.026 | 1.020 | 1.006 | 0.983 | 0.955 | 0.927 | 0.904 | 0.889 | 0.884 | 0.884 | 0.884 | 0.880 | 0.867 | 0.833 | 0.775 | 0.702 | 0.641 | |
| 33 | 8.973 | 8.924 | 8.793 | 8.576 | 8.312 | 8.051 | 7.840 | 7.708 | 7.660 | 7.663 | 7.664 | 7.623 | 7.494 | 7.201 | 6.691 | 6.053 | 5.521 | + 0 |
| 34 | 7.861 | 7.817 | 7.697 | 7.494 | 7.248 | 7.007 | 6.812 | 6.692 | 6.650 | 6.654 | 6.654 | 6.609 | 6.488 | 6.228 | 5.785 | 5.230 | 4.767 | |
| 35 | 6.896 | 6.857 | 6.747 | 6.559 | 6.330 | 6.107 | 5.928 | 5.819 | 5.783 | 5.788 | 5.785 | 5.738 | 5.624 | 5.394 | 5.008 | 4.526 | 4.123 | |
| 36 | 6.057 | 6.023 | 5.922 | 5.748 | 5.536 | 5.331 | 5.167 | 5.068 | 5.036 | 5.042 | 5.037 | 4.989 | 4.881 | 4.677 | 4.341 | 3.923 | 3.572 | |
| 37 | 5.327 | 5.298 | 5.205 | 5.044 | 4.849 | 4.660 | 4.510 | 4.420 | 4.392 | 4.398 | 4.392 | 4.344 | 4.243 | 4.060 | 3.767 | 3.404 | 3.098 | |
| 38 | 4.691 | 4.666 | 4.581 | 4.433 | 4.253 | 4.080 | 3.942 | 3.860 | 3.836 | 3.842 | 3.835 | 3.788 | 3.693 | 3.530 | 3.274 | 2.957 | 2.691 | |
| 39 | 4.137 | 4.114 | 4.036 | 3.900 | 3.735 | 3.577 | 3.451 | 3.376 | 3.355 | 3.361 | 3.354 | 3.308 | 3.219 | 3.073 | 2.848 | 2.572 | 2.340 | |
| 40 | 3.652 | 3.632 | 3.561 | 3.435 | 3.284 | 3.139 | 3.025 | 2.957 | 2.938 | 2.944 | 2.937 | 2.893 | 2.810 | 2.678 | 2.480 | 2.239 | 2.036 | |
| 41 | 3.228 | 3.210 | 3.145 | 3.030 | 2.891 | 2.759 | 2.655 | 2.593 | 2.576 | 2.582 | 2.575 | 2.533 | 2.456 | 2.337 | 2.163 | 1.951 | 1.774 | |
| 42 | 2.857 | 2.840 | 2.780 | 2.674 | 2.547 | 2.427 | 2.332 | 2.277 | 2.262 | 2.268 | 2.261 | 2.222 | 2.149 | 2.042 | 1.887 | 1.702 | 1.546 | |
| 43 | 2.530 | 2.515 | 2.460 | 2.363 | 2.247 | 2.137 | 2.051 | 2.001 | 1.988 | 1.993 | 1.987 | 1.950 | 1.883 | 1.786 | 1.649 | 1.486 | 1.349 | |
| 44 | 2.244 | 2.229 | 2.178 | 2.089 | 1.983 | 1.884 | 1.806 | 1.760 | 1.748 | 1.754 | 1.749 | 1.714 | 1.652 | 1.563 | 1.441 | 1.298 | 1.178 | |
| 45 | 1.991 | 1.978 | 1.930 | 1.848 | 1.752 | 1.662 | 1.591 | 1.550 | 1.540 | 1.545 | 1.540 | 1.508 | 1.450 | 1.370 | 1.261 | 1.134 | 1.029 | |
| 46 | 1.768 | 1.755 | 1.711 | 1.636 | 1.548 | 1.467 | 1.403 | 1.366 | 1.357 | 1.362 | 1.358 | 1.327 | 1.274 | 1.201 | 1.104 | 0.992 | 0.899 | |
| 47 | 1.571 | 1.559 | 1.518 | 1.449 | 1.369 | 1.295 | 1.238 | 1.204 | 1.196 | 1.201 | 1.197 | 1.169 | 1.120 | 1.053 | 0.966 | 0.868 | 0.787 | |
| 48 | 1.396 | 1.385 | 1.347 | 1.283 | 1.211 | 1.144 | 1.092 | 1.062 | 1.055 | 1.060 | 1.056 | 1.030 | 0.984 | 0.923 | 0.846 | 0.759 | 0.688 | |
| 49 | 1.242 | 1.230 | 1.195 | 1.137 | 1.071 | 1.010 | 0.964 | 0.937 | 0.932 | 0.936 | 0.932 | 0.908 | 0.865 | 0.810 | 0.741 | 0.665 | 0.603 | |
| 50 | 1.104 | 1.093 | 1.061 | 1.007 | 0.947 | 0.893 | 0.851 | 0.827 | 0.822 | 0.827 | 0.823 | 0.800 | 0.760 | 0.710 | 0.649 | 9.582 | 0.528 | |
| 51 | 9.823 | 9.717 | 9.409 | 8.917 | 8.370 | 7.883 | 7.514 | 7.304 | 7.261 | 7.299 | 7.260 | 7.045 | 6.679 | 6.222 | 5.681 | 5.098 | 4.627 | - 1 |
| 52 | 8.735 | 8.633 | 8.346 | 7.894 | 7.397 | 6.960 | 6.632 | 6.447 | 6.411 | 6.444 | 6.405 | 6.201 | 5.863 | 5.450 | 4.972 | 4.464 | 4.056 | |
| 53 | 7.766 | 7.668 | 7.399 | 6.984 | 6.533 | 6.141 | 5.851 | 5.689 | 5.659 | 5.688 | 5.647 | 5.455 | 5.142 | 4.769 | 4.349 | 3.908 | 3.556 | |
| 54 | 6.902 | 6.807 | 6.556 | 6.174 | 5.766 | 5.415 | 5.159 | 5.018 | 4.993 | 5.018 | 4.976 | 4.793 | 4.505 | 4.169 | 3.801 | 3.421 | 3.119 | |
| 55 | 6.130 | 6.039 | 5.805 | 5.454 | 5.084 | 4.771 | 4.546 | 4.424 | 4.404 | 4.425 | 4.380 | 4.208 | 3.941 | 3.641 | 3.320 | 2.994 | 2.735 | |
| 56 | 5.441 | 5.353 | 5.135 | 4.812 | 4.478 | 4.199 | 4.002 | 3.897 | 3.881 | 3.898 | 3.852 | 3.689 | 3.444 | 3.175 | 2.897 | 2.619 | 2.398 | |
| 57 | 4.825 | 4.741 | 4.537 | 4.241 | 3.939 | 3.691 | 3.519 | 3.430 | 3.418 | 3.431 | 3.383 | 3.229 | 3.005 | 2.766 | 2.526 | 2.289 | 2.102 | |
| 58 | 4.275 | 4.194 | 4.004 | 3.733 | 3.460 | 3.240 | 3.091 | 3.016 | 3.007 | 3.017 | 2.968 | 2.823 | 2.618 | 2.406 | 2.200 | 2.000 | 1.842 | |
| 59 | 3.782 | 3.706 | 3.529 | 3.281 | 3.034 | 2.840 | 2.711 | 2.648 | 2.642 | 2.649 | 2.600 | 2.464 | 2.278 | 2.090 | 1.914 | 1.746 | 1.613 | |
| 60 | 3.343 | 3.270 | 3.106 | 2.878 | 2.656 | 2.485 | 2.374 | 2.323 | 2.319 | 2.323 | 2.275 | 2.148 | 1.979 | 1.814 | 1.663 | 1.522 | 1.412 | |
| 61 | 2.950 | 2.881 | 2.729 | 2.521 | 2.321 | 2.170 | 2.076 | 2.034 | 2.032 | 2.034 | 1.987 | 1.869 | 1.716 | 1.571 | 1.444 | 1.326 | 1.234 | |
| 62 | 2.599 | 2.534 | 2.394 | 2.204 | 2.024 | 1.892 | 1.812 | 1.778 | 1.778 | 1.778 | 1.732 | 1.624 | 1.487 | 1.360 | 1.252 | 1.154 | 1.078 | |
| 63 | 2.285 | 2.225 | 2.096 | 1.923 | 1.761 | 1.646 | 1.578 | 1.551 | 1.552 | 1.551 | 1.508 | 1.409 | 1.286 | 1.176 | 1.084 | 1.004 | 0.940 | |
| 64 | 2.006 | 1.950 | 1.831 | 1.674 | 1.530 | 1.429 | 1.372 | 1.351 | 1.353 | 1.351 | 1.310 | 1.220 | 1.111 | 1.016 | 0.939 | 0.872 | 0.819 | |
| 65 | 1.757 | 1.705 | 1.596 | 1.453 | 1.325 | 1.238 | 1.190 | 1.174 | 1.177 | 1.175 | 1.137 | 1.056 | 0.959 | 0.876 | 0.811 | 0.756 | 0.713 | |
| 66 | 1.535 | 1.488 | 1.388 | 1.259 | 1.145 | 1.069 | 1.030 | 1.019 | 1.022 | 1.019 | 0.984 | 0.912 | 0.827 | 0.756 | 0.701 | 0.655 | 0.619 | |
| 67 | 1.338 | 1.294 | 1.204 | 1.088 | 0.987 | 0.922 | 0.890 | 0.881 | 0.885 | 0.882 | 0.851 | 0.787 | 0.713 | 0.651 | 0.605 | 0.567 | 0.537 | |
| 68 | 1.163 | 1.123 | 1.042 | 0.938 | 0.849 | 0.793 | 0.767 | 0.761 | 0.745 | 0.762 | 0.734 | 0.678 | 0.614 | 0.561 | 0.522 | 0.490 | 0.465 | |
| 69 | 1.008 | 0.972 | 0.898 | 0.807 | 0.729 | 0.681 | 0.659 | 0.655 | 0.659 | 0.657 | 0.632 | 0.583 | 0.528 | 0.483 | 0.450 | 0.423 | 0.402 | |
| 70 | 8.712 | 8.385 | 7.727 | 6.915 | 6.234 | 5.829 | 5.657 | 5.631 | 5.665 | 5.644 | 5.432 | 5.014 | 4.538 | 4.153 | 3.876 | 3.652 | 3.474 | - 2 |
| 71 | 7.500 | 7.208 | 6.625 | 5.911 | 5.324 | 4.981 | 4.843 | 4.826 | 4.858 | 4.840 | 4.659 | 4.303 | 3.898 | 3.571 | 3.338 | 3.148 | 2.997 | |
| 72 | 6.433 | 6.174 | 5.660 | 5.038 | 4.534 | 4.247 | 4.136 | 4.127 | 4.154 | 4.140 | 3.988 | 3.687 | 3.345 | 3.069 | 2.873 | 2.712 | 2.583 | |
| 73 | 5.495 | 5.267 | 4.818 | 4.280 | 3.852 | 3.613 | 3.526 | 3.520 | 3.544 | 3.532 | 3.407 | 3.155 | 2.868 | 2.636 | 2.472 | 2.336 | 2.225 | |
| 74 | 4.673 | 4.474 | 4.086 | 3.626 | 3.264 | 3.068 | 3.000 | 2.996 | 3.015 | 3.006 | 2.904 | 2.696 | 2.456 | 2.263 | 2.126 | 2.010 | 1.915 | |
| 75 | 3.955 | 3.784 | 3.451 | 3.061 | 2.760 | 2.601 | 2.547 | 2.545 | 2.559 | 2.553 | 2.471 | 2.300 | 2.101 | 1.941 | 1.827 | 1.730 | 1.648 | |
| 76 | 3.330 | 3.184 | 2.903 | 2.576 | 2.328 | 2.201 | 2.160 | 2.157 | 2.168 | 2.163 | 2.098 | 1.959 | 1.795 | 1.664 | 1.570 | 1.489 | 1.418 | |
| 77 | 2.790 | 2.666 | 2.430 | 2.160 | 1.960 | 1.860 | 1.829 | 1.826 | 1.833 | 1.830 | 1.779 | 1.666 | 1.532 | 1.425 | 1.349 | 1.281 | 1.220 | |
| 78 | 2.324 | 2.220 | 2.025 | 1.805 | 1.646 | 1.570 | 1.547 | 1.544 | 1.548 | 1.546 | 1.506 | 1.415 | 1.306 | 1.220 | 1.159 | 1.102 | 1.049 | |
| 79 | 1.924 | 1.838 | 1.679 | 1.503 | 1.379 | 1.323 | 1.308 | 1.304 | 1.306 | 1.305 | 1.274 | 1.201 | 1.113 | 1.044 | 0.995 | 0.948 | 0.903 | |
| 80 | 1.584 | 1.513 | 1.385 | 1.247 | 1.153 | 1.114 | 1.105 | 1.102 | 1.102 | 1.102 | 1.077 | 1.019 | 0.948 | 0.894 | 0.855 | 0.815 | 0.776 | |

(1 MBAR = 100 NEWTON/M SQ)

ZONAL MEAN PRESSURE (MB)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 7.263 | 7.349 | 7.505 | 7.695 | 7.841 | 7.887 | 7.859 | 7.834 | 7.853 | 7.871 | 7.809 | 7.633 | 7.384 | 7.112 | 6.842 | 6.586 | 6.390 + 1 |
| 19 | 6.262 | 6.330 | 6.451 | 6.592 | 6.689 | 6.701 | 6.657 | 6.625 | 6.635 | 6.652 | 6.612 | 6.487 | 6.301 | 6.085 | 5.849 | 5.613 | 5.426 |
| 20 | 5.398 | 5.452 | 5.546 | 5.650 | 5.712 | 5.702 | 5.649 | 5.611 | 5.613 | 5.627 | 5.601 | 5.515 | 5.378 | 5.206 | 5.000 | 4.779 | 4.600 |
| 21 | 4.655 | 4.697 | 4.769 | 4.846 | 4.883 | 4.859 | 4.802 | 4.761 | 4.757 | 4.767 | 4.752 | 4.692 | 4.593 | 4.455 | 4.274 | 4.069 | 3.900 |
| 22 | 4.015 | 4.049 | 4.104 | 4.160 | 4.179 | 4.147 | 4.089 | 4.047 | 4.040 | 4.047 | 4.038 | 3.998 | 3.925 | 3.814 | 3.654 | 3.466 | 3.308 |
| 23 | 3.464 | 3.492 | 3.535 | 3.574 | 3.581 | 3.545 | 3.489 | 3.448 | 3.438 | 3.443 | 3.438 | 3.411 | 3.357 | 3.266 | 3.126 | 2.954 | 2.809 |
| 24 | 2.991 | 3.014 | 3.047 | 3.074 | 3.072 | 3.035 | 2.982 | 2.943 | 2.932 | 2.936 | 2.934 | 2.915 | 2.874 | 2.798 | 2.675 | 2.521 | 2.389 |
| 25 | 2.585 | 2.604 | 2.629 | 2.647 | 2.639 | 2.603 | 2.554 | 2.518 | 2.506 | 2.509 | 2.509 | 2.495 | 2.462 | 2.398 | 2.290 | 2.154 | 2.036 |
| 26 | 2.235 | 2.251 | 2.271 | 2.282 | 2.271 | 2.236 | 2.191 | 2.158 | 2.147 | 2.150 | 2.151 | 2.140 | 2.111 | 2.056 | 1.962 | 1.842 | 1.738 |
| 27 | 1.934 | 1.949 | 1.964 | 1.970 | 1.956 | 1.923 | 1.883 | 1.853 | 1.842 | 1.845 | 1.847 | 1.837 | 1.812 | 1.764 | 1.683 | 1.578 | 1.486 |
| 28 | 1.676 | 1.689 | 1.701 | 1.702 | 1.688 | 1.657 | 1.621 | 1.594 | 1.584 | 1.588 | 1.589 | 1.580 | 1.557 | 1.514 | 1.444 | 1.353 | 1.273 |
| 29 | 1.453 | 1.465 | 1.474 | 1.473 | 1.458 | 1.431 | 1.398 | 1.373 | 1.365 | 1.368 | 1.370 | 1.361 | 1.339 | 1.301 | 1.239 | 1.161 | 1.092 |
| 30 | 1.262 | 1.272 | 1.280 | 1.277 | 1.262 | 1.237 | 1.208 | 1.186 | 1.178 | 1.182 | 1.183 | 1.174 | 1.153 | 1.118 | 1.065 | 0.997 | 0.938 |
| 31 | 1.097 | 1.106 | 1.112 | 1.108 | 1.094 | 1.071 | 1.045 | 1.025 | 1.019 | 1.022 | 1.024 | 1.015 | 0.994 | 0.962 | 0.916 | 0.858 | 0.806 |
| 32 | 9.546 | 9.634 | 9.677 | 9.629 | 9.492 | 9.288 | 9.058 | 8.882 | 8.825 | 8.860 | 8.873 | 8.778 | 8.577 | 8.288 | 7.885 | 7.384 | 6.940 + 0 |
| 33 | 8.319 | 8.399 | 8.432 | 8.379 | 8.251 | 8.068 | 7.864 | 7.707 | 7.657 | 7.691 | 7.702 | 7.607 | 7.412 | 7.148 | 6.794 | 6.361 | 5.978 |
| 34 | 7.259 | 7.331 | 7.358 | 7.303 | 7.183 | 7.020 | 6.838 | 6.698 | 6.656 | 6.688 | 6.696 | 6.602 | 6.415 | 6.172 | 5.860 | 5.485 | 5.154 |
| 35 | 6.342 | 6.408 | 6.429 | 6.374 | 6.263 | 6.117 | 5.956 | 5.832 | 5.795 | 5.826 | 5.831 | 5.738 | 5.560 | 5.336 | 5.061 | 4.734 | 4.446 |
| 36 | 5.549 | 5.608 | 5.624 | 5.571 | 5.469 | 5.338 | 5.195 | 5.085 | 5.054 | 5.083 | 5.086 | 4.996 | 4.827 | 4.621 | 4.375 | 4.089 | 3.837 |
| 37 | 4.861 | 4.915 | 4.927 | 4.876 | 4.783 | 4.665 | 4.539 | 4.442 | 4.415 | 4.442 | 4.443 | 4.356 | 4.197 | 4.007 | 3.787 | 3.535 | 3.314 |
| 38 | 4.264 | 4.312 | 4.322 | 4.274 | 4.188 | 4.083 | 3.971 | 3.886 | 3.863 | 3.888 | 3.887 | 3.804 | 3.655 | 3.480 | 3.282 | 3.058 | 2.865 |
| 39 | 3.745 | 3.789 | 3.796 | 3.751 | 3.673 | 3.578 | 3.479 | 3.404 | 3.386 | 3.408 | 3.405 | 3.327 | 3.189 | 3.027 | 2.847 | 2.649 | 2.478 |
| 40 | 3.294 | 3.332 | 3.338 | 3.296 | 3.225 | 3.140 | 3.052 | 2.987 | 2.972 | 2.992 | 2.988 | 2.915 | 2.786 | 2.637 | 2.474 | 2.296 | 2.145 |
| 41 | 2.900 | 2.934 | 2.939 | 2.900 | 2.835 | 2.758 | 2.681 | 2.625 | 2.612 | 2.630 | 2.625 | 2.557 | 2.437 | 2.300 | 2.152 | 1.993 | 1.859 |
| 42 | 2.556 | 2.586 | 2.590 | 2.555 | 2.495 | 2.426 | 2.357 | 2.309 | 2.300 | 2.316 | 2.309 | 2.245 | 2.136 | 2.009 | 1.874 | 1.731 | 1.612 |
| 43 | 2.255 | 2.282 | 2.285 | 2.252 | 2.198 | 2.135 | 2.075 | 2.034 | 2.027 | 2.041 | 2.034 | 1.974 | 1.873 | 1.757 | 1.633 | 1.505 | 1.400 |
| 44 | 1.991 | 2.015 | 2.017 | 1.988 | 1.938 | 1.881 | 1.828 | 1.793 | 1.788 | 1.801 | 1.793 | 1.738 | 1.645 | 1.538 | 1.425 | 1.310 | 1.217 |
| 45 | 1.760 | 1.780 | 1.782 | 1.755 | 1.710 | 1.658 | 1.612 | 1.582 | 1.579 | 1.591 | 1.582 | 1.531 | 1.446 | 1.348 | 1.245 | 1.142 | 1.059 |
| 46 | 1.556 | 1.574 | 1.576 | 1.551 | 1.509 | 1.463 | 1.422 | 1.397 | 1.396 | 1.406 | 1.397 | 1.350 | 1.272 | 1.182 | 1.088 | 0.996 | 0.924 |
| 47 | 1.377 | 1.393 | 1.394 | 1.371 | 1.333 | 1.291 | 1.255 | 1.234 | 1.234 | 1.243 | 1.234 | 1.190 | 1.119 | 1.037 | 0.952 | 0.870 | 0.806 |
| 48 | 1.219 | 1.233 | 1.233 | 1.212 | 1.177 | 1.139 | 1.108 | 1.091 | 1.092 | 1.100 | 1.091 | 1.050 | 0.984 | 0.910 | 0.833 | 0.760 | 0.705 |
| 49 | 1.079 | 1.091 | 1.091 | 1.072 | 1.040 | 1.005 | 0.978 | 0.964 | 0.966 | 0.973 | 0.964 | 0.926 | 0.866 | 0.798 | 0.730 | 0.665 | 0.617 |
| 50 | 9.559 | 9.660 | 9.653 | 9.474 | 9.181 | 8.873 | 8.632 | 8.519 | 8.546 | 8.608 | 8.519 | 8.168 | 7.620 | 7.004 | 6.392 | 5.827 | 5.407 - 1 |
| 51 | 8.466 | 8.552 | 8.540 | 8.372 | 8.105 | 7.828 | 7.618 | 7.527 | 7.558 | 7.613 | 7.525 | 7.200 | 6.699 | 6.142 | 5.599 | 5.107 | 4.745 |
| 52 | 7.498 | 7.569 | 7.552 | 7.395 | 7.151 | 6.903 | 6.721 | 6.648 | 6.682 | 6.730 | 6.644 | 6.342 | 5.885 | 5.384 | 4.904 | 4.470 | 4.169 |
| 53 | 6.639 | 6.697 | 6.674 | 6.528 | 6.305 | 6.084 | 5.926 | 5.868 | 5.903 | 5.945 | 5.861 | 5.582 | 5.165 | 4.715 | 4.294 | 3.928 | 3.667 |
| 54 | 5.876 | 5.923 | 5.895 | 5.757 | 5.555 | 5.358 | 5.221 | 5.176 | 5.211 | 5.247 | 5.166 | 4.907 | 4.528 | 4.126 | 3.759 | 3.448 | 3.227 |
| 55 | 5.198 | 5.235 | 5.202 | 5.072 | 4.888 | 4.714 | 4.597 | 4.561 | 4.594 | 4.626 | 4.548 | 4.309 | 3.964 | 3.607 | 3.289 | 3.026 | 2.843 |
| 56 | 4.596 | 4.623 | 4.586 | 4.463 | 4.296 | 4.143 | 4.043 | 4.015 | 4.046 | 4.073 | 3.998 | 3.778 | 3.466 | 3.150 | 2.876 | 2.656 | 2.505 |
| 57 | 4.060 | 4.079 | 4.038 | 3.922 | 3.771 | 3.637 | 3.551 | 3.530 | 3.559 | 3.581 | 3.510 | 3.308 | 3.026 | 2.747 | 2.513 | 2.330 | 2.207 |
| 58 | 3.584 | 3.595 | 3.552 | 3.442 | 3.305 | 3.188 | 3.116 | 3.099 | 3.126 | 3.144 | 3.077 | 2.892 | 2.638 | 2.393 | 2.194 | 2.044 | 1.945 |
| 59 | 3.160 | 3.165 | 3.119 | 3.015 | 2.892 | 2.791 | 2.730 | 2.717 | 2.741 | 2.756 | 2.693 | 2.524 | 2.296 | 2.081 | 1.914 | 1.792 | 1.713 |
| 60 | 2.783 | 2.783 | 2.735 | 2.637 | 2.527 | 2.439 | 2.389 | 2.379 | 2.400 | 2.411 | 2.353 | 2.200 | 1.996 | 1.809 | 1.668 | 1.570 | 1.508 |
| 61 | 2.448 | 2.443 | 2.394 | 2.302 | 2.203 | 2.128 | 2.087 | 2.080 | 2.098 | 2.106 | 2.052 | 1.914 | 1.733 | 1.570 | 1.452 | 1.374 | 1.326 |
| 62 | 2.150 | 2.142 | 2.092 | 2.005 | 1.917 | 1.854 | 1.820 | 1.815 | 1.830 | 1.837 | 1.787 | 1.662 | 1.502 | 1.361 | 1.263 | 1.201 | 1.165 |
| 63 | 1.885 | 1.874 | 1.824 | 1.744 | 1.665 | 1.612 | 1.585 | 1.581 | 1.594 | 1.598 | 1.553 | 1.442 | 1.300 | 1.178 | 1.097 | 1.049 | 1.022 |
| 64 | 1.650 | 1.637 | 1.588 | 1.513 | 1.444 | 1.399 | 1.378 | 1.375 | 1.386 | 1.388 | 1.347 | 1.249 | 1.124 | 1.019 | 0.952 | 0.915 | 0.895 |
| 65 | 1.442 | 1.427 | 1.379 | 1.310 | 1.249 | 1.212 | 1.195 | 1.194 | 1.202 | 1.204 | 1.167 | 1.080 | 0.971 | 0.881 | 0.826 | 0.797 | 0.783 |
| 66 | 1.256 | 1.241 | 1.195 | 1.132 | 1.078 | 1.047 | 1.035 | 1.035 | 1.041 | 1.042 | 1.009 | 0.933 | 0.838 | 0.761 | 0.715 | 0.693 | 0.683 |
| 67 | 1.093 | 1.076 | 1.033 | 0.976 | 0.929 | 0.904 | 0.895 | 0.895 | 0.900 | 0.900 | 0.871 | 0.804 | 0.723 | 0.657 | 0.619 | 0.602 | 0.595 |
| 68 | 9.475 | 9.314 | 8.913 | 8.392 | 7.983 | 7.781 | 7.718 | 7.721 | 7.763 | 7.756 | 7.507 | 6.931 | 6.224 | 5.663 | 5.354 | 5.226 | 5.177 - 2 |
| 69 | 8.194 | 8.038 | 7.668 | 7.202 | 6.848 | 6.685 | 6.644 | 6.649 | 6.682 | 6.673 | 6.459 | 5.963 | 5.357 | 4.881 | 4.626 | 4.528 | 4.494 |
| 70 | 7.064 | 6.916 | 6.579 | 6.165 | 5.862 | 5.733 | 5.706 | 5.713 | 5.739 | 5.730 | 5.548 | 5.125 | 4.607 | 4.204 | 3.994 | 3.918 | 3.894 |
| 71 | 6.069 | 5.932 | 5.629 | 5.265 | 5.007 | 4.905 | 4.891 | 4.898 | 4.917 | 4.911 | 4.758 | 4.399 | 3.958 | 3.618 | 3.445 | 3.386 | 3.368 |
| 72 | 5.196 | 5.071 | 4.802 | 4.486 | 4.268 | 4.189 | 4.182 | 4.189 | 4.204 | 4.199 | 4.073 | 3.771 | 3.398 | 3.112 | 2.970 | 2.923 | 2.909 |
| 73 | 4.431 | 4.320 | 4.084 | 3.812 | 3.631 | 3.570 | 3.569 | 3.573 | 3.585 | 3.584 | 3.481 | 3.228 | 2.913 | 2.674 | 2.558 | 2.522 | 2.510 |
| 74 | 3.764 | 3.666 | 3.462 | 3.231 | 3.082 | 3.037 | 3.038 | 3.041 | 3.050 | 3.052 | 2.970 | 2.759 | 2.495 | 2.296 | 2.202 | 2.173 | 2.163 |
| 75 | 3.184 | 3.099 | 2.925 | 2.732 | 2.611 | 2.578 | 2.581 | 2.582 | 2.589 | 2.594 | 2.530 | 2.355 | 2.134 | 1.970 | 1.894 | 1.872 | 1.862 |
| 76 | 2.682 | 2.609 | 2.463 | 2.303 | 2.208 | 2.185 | 2.188 | 2.187 | 2.192 | 2.200 | 2.151 | 2.007 | 1.823 | 1.688 | 1.628 | 1.611 | 1.602 |
| 77 | 2.249 | 2.187 | 2.066 | 1.937 | 1.863 | 1.849 | 1.852 | 1.848 | 1.853 | 1.863 | 1.826 | 1.707 | 1.555 | 1.445 | 1.399 | 1.386 | 1.377 |
| 78 | 1.878 | 1.826 | 1.727 | 1.625 | 1.569 | 1.562 | 1.565 | 1.560 | 1.564 | 1.575 | 1.548 | 1.451 | 1.325 | 1.236 | 1.201 | 1.192 | 1.183 |
| 79 | 1.562 | 1.519 | 1.438 | 1.359 | 1.320 | 1.318 | 1.321 | 1.315 | 1.318 | 1.330 | 1.311 | 1.231 | 1.128 | 1.056 | 1.031 | 1.025 | 1.014 |
| 80 | 1.295 | 1.258 | 1.194 | 1.134 | 1.108 | 1.111 | 1.114 | 1.109 | 1.112 | 1.124 | 1.109 | 1.044 | 0.959 | 0.903 | 0.884 | 0.880 | 0.871 |

(1 MBAR = 100 NEWTON/M SQ)

ZONAL MEAN PRESSURE (MB)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.931 | 7.099 | 7.341 | 7.591 | 7.773 | 7.848 | 7.845 | 7.827 | 7.825 | 7.811 | 7.740 | 7.606 | 7.440 | 7.257 | 7.044 | 6.803 | 6.595 | + 1 |
| 19 | 5.952 | 6.097 | 6.299 | 6.500 | 6.634 | 6.674 | 6.652 | 6.623 | 6.617 | 6.611 | 6.565 | 6.472 | 6.350 | 6.208 | 6.032 | 5.825 | 5.644 | |
| 20 | 5.108 | 5.233 | 5.403 | 5.565 | 5.664 | 5.682 | 5.648 | 5.614 | 5.605 | 5.602 | 5.574 | 5.509 | 5.420 | 5.310 | 5.162 | 4.984 | 4.827 | |
| 21 | 4.383 | 4.491 | 4.635 | 4.766 | 4.839 | 4.843 | 4.804 | 4.768 | 4.756 | 4.755 | 4.738 | 4.694 | 4.629 | 4.541 | 4.418 | 4.264 | 4.129 | |
| 22 | 3.760 | 3.855 | 3.977 | 4.084 | 4.139 | 4.133 | 4.094 | 4.058 | 4.045 | 4.045 | 4.035 | 4.004 | 3.955 | 3.884 | 3.780 | 3.649 | 3.533 | |
| 23 | 3.226 | 3.309 | 3.414 | 3.502 | 3.543 | 3.533 | 3.495 | 3.460 | 3.447 | 3.448 | 3.443 | 3.421 | 3.381 | 3.322 | 3.234 | 3.124 | 3.026 | |
| 24 | 2.768 | 2.842 | 2.932 | 3.004 | 3.036 | 3.024 | 2.989 | 2.957 | 2.944 | 2.945 | 2.943 | 2.926 | 2.893 | 2.842 | 2.767 | 2.675 | 2.593 | |
| 25 | 2.376 | 2.441 | 2.519 | 2.580 | 2.604 | 2.593 | 2.562 | 2.533 | 2.520 | 2.521 | 2.521 | 2.507 | 2.478 | 2.432 | 2.369 | 2.291 | 2.224 | |
| 26 | 2.039 | 2.098 | 2.166 | 2.217 | 2.237 | 2.227 | 2.199 | 2.173 | 2.161 | 2.162 | 2.163 | 2.151 | 2.124 | 2.083 | 2.028 | 1.964 | 1.908 | |
| 27 | 1.752 | 1.804 | 1.863 | 1.907 | 1.923 | 1.915 | 1.891 | 1.868 | 1.857 | 1.859 | 1.860 | 1.849 | 1.822 | 1.784 | 1.737 | 1.684 | 1.639 | |
| 28 | 1.505 | 1.552 | 1.604 | 1.641 | 1.656 | 1.649 | 1.629 | 1.608 | 1.599 | 1.600 | 1.602 | 1.591 | 1.565 | 1.530 | 1.489 | 1.445 | 1.408 | |
| 29 | 1.294 | 1.336 | 1.382 | 1.415 | 1.427 | 1.422 | 1.405 | 1.387 | 1.379 | 1.380 | 1.382 | 1.371 | 1.346 | 1.313 | 1.277 | 1.240 | 1.210 | |
| 30 | 1.113 | 1.151 | 1.192 | 1.221 | 1.232 | 1.228 | 1.214 | 1.199 | 1.191 | 1.193 | 1.194 | 1.183 | 1.159 | 1.129 | 1.096 | 1.065 | 1.041 | |
| 31 | 0.959 | 0.993 | 1.029 | 1.054 | 1.065 | 1.062 | 1.051 | 1.037 | 1.031 | 1.032 | 1.033 | 1.023 | 1.000 | 0.971 | 0.942 | 0.915 | 0.895 | |
| 32 | 8.262 | 8.569 | 8.896 | 9.121 | 9.214 | 9.198 | 9.104 | 8.993 | 8.938 | 8.952 | 8.957 | 8.856 | 8.637 | 8.367 | 8.105 | 7.875 | 7.704 | + 0 |
| 33 | 7.128 | 7.403 | 7.697 | 7.900 | 7.987 | 7.978 | 7.902 | 7.808 | 7.762 | 7.775 | 7.776 | 7.679 | 7.473 | 7.221 | 6.983 | 6.781 | 6.635 | |
| 34 | 6.157 | 6.404 | 6.669 | 6.852 | 6.933 | 6.931 | 6.869 | 6.791 | 6.753 | 6.763 | 6.761 | 6.668 | 6.476 | 6.243 | 6.025 | 5.844 | 5.717 | |
| 35 | 5.324 | 5.546 | 5.786 | 5.952 | 6.028 | 6.029 | 5.980 | 5.916 | 5.885 | 5.894 | 5.888 | 5.800 | 5.622 | 5.407 | 5.207 | 5.043 | 4.930 | |
| 36 | 4.610 | 4.810 | 5.027 | 5.179 | 5.248 | 5.253 | 5.214 | 5.162 | 5.137 | 5.144 | 5.136 | 5.053 | 4.889 | 4.692 | 4.508 | 4.358 | 4.256 | |
| 37 | 3.997 | 4.177 | 4.373 | 4.512 | 4.577 | 4.584 | 4.553 | 4.512 | 4.492 | 4.498 | 4.486 | 4.409 | 4.260 | 4.079 | 3.909 | 3.771 | 3.677 | |
| 38 | 3.470 | 3.632 | 3.811 | 3.938 | 3.998 | 4.006 | 3.982 | 3.950 | 3.935 | 3.939 | 3.925 | 3.853 | 3.718 | 3.553 | 3.396 | 3.268 | 3.181 | |
| 39 | 3.017 | 3.163 | 3.325 | 3.442 | 3.497 | 3.506 | 3.487 | 3.464 | 3.453 | 3.455 | 3.439 | 3.373 | 3.250 | 3.100 | 2.955 | 2.836 | 2.756 | |
| 40 | 2.627 | 2.759 | 2.906 | 3.013 | 3.064 | 3.072 | 3.059 | 3.041 | 3.034 | 3.035 | 3.018 | 2.956 | 2.846 | 2.709 | 2.576 | 2.465 | 2.391 | |
| 41 | 2.290 | 2.409 | 2.543 | 2.641 | 2.687 | 2.696 | 2.686 | 2.675 | 2.671 | 2.670 | 2.652 | 2.595 | 2.495 | 2.372 | 2.250 | 2.147 | 2.077 | |
| 42 | 1.999 | 2.107 | 2.229 | 2.319 | 2.361 | 2.368 | 2.362 | 2.355 | 2.354 | 2.352 | 2.333 | 2.280 | 2.191 | 2.080 | 1.967 | 1.872 | 1.808 | |
| 43 | 1.748 | 1.845 | 1.956 | 2.038 | 2.076 | 2.083 | 2.079 | 2.076 | 2.077 | 2.074 | 2.055 | 2.006 | 1.926 | 1.826 | 1.723 | 1.635 | 1.575 | |
| 44 | 1.530 | 1.617 | 1.718 | 1.793 | 1.827 | 1.834 | 1.832 | 1.832 | 1.834 | 1.831 | 1.812 | 1.767 | 1.695 | 1.605 | 1.511 | 1.430 | 1.375 | |
| 45 | 1.340 | 1.419 | 1.510 | 1.579 | 1.610 | 1.616 | 1.615 | 1.618 | 1.622 | 1.618 | 1.599 | 1.557 | 1.493 | 1.412 | 1.326 | 1.252 | 1.202 | |
| 46 | 1.176 | 1.246 | 1.329 | 1.391 | 1.419 | 1.424 | 1.425 | 1.430 | 1.435 | 1.431 | 1.412 | 1.374 | 1.316 | 1.243 | 1.165 | 1.098 | 1.052 | |
| 47 | 1.032 | 1.095 | 1.170 | 1.226 | 1.252 | 1.256 | 1.258 | 1.264 | 1.270 | 1.266 | 1.247 | 1.212 | 1.160 | 1.094 | 1.024 | 0.963 | 0.922 | |
| 48 | 0.907 | 0.963 | 1.030 | 1.082 | 1.104 | 1.108 | 1.111 | 1.118 | 1.124 | 1.120 | 1.102 | 1.069 | 1.023 | 0.964 | 0.901 | 0.846 | 0.809 | |
| 49 | 7.969 | 8.471 | 9.022 | 9.539 | 9.744 | 9.780 | 9.805 | 9.882 | 9.947 | 9.909 | 9.734 | 9.436 | 9.018 | 8.492 | 7.925 | 7.430 | 7.103 | - 1 |
| 50 | 7.007 | 7.453 | 7.996 | 8.412 | 8.597 | 8.628 | 8.656 | 8.737 | 8.803 | 8.765 | 8.599 | 8.324 | 7.949 | 7.478 | 6.971 | 6.530 | 6.240 | |
| 51 | 6.163 | 6.558 | 7.041 | 7.416 | 7.581 | 7.610 | 7.640 | 7.720 | 7.786 | 7.749 | 7.592 | 7.341 | 7.003 | 6.582 | 6.130 | 5.738 | 5.484 | |
| 52 | 5.421 | 5.769 | 6.198 | 6.534 | 6.682 | 6.708 | 6.739 | 6.818 | 6.881 | 6.847 | 6.700 | 6.469 | 6.165 | 5.789 | 5.387 | 5.042 | 4.820 | |
| 53 | 4.767 | 5.073 | 5.453 | 5.752 | 5.885 | 5.910 | 5.940 | 6.016 | 6.077 | 6.044 | 5.907 | 5.696 | 5.422 | 5.087 | 4.731 | 4.428 | 4.236 | |
| 54 | 4.192 | 4.459 | 4.793 | 5.058 | 5.178 | 5.202 | 5.231 | 5.303 | 5.360 | 5.330 | 5.203 | 5.011 | 4.764 | 4.466 | 4.152 | 3.887 | 3.721 | |
| 55 | 3.684 | 3.916 | 4.209 | 4.443 | 4.551 | 4.574 | 4.603 | 4.670 | 4.722 | 4.694 | 4.577 | 4.403 | 4.182 | 3.916 | 3.639 | 3.409 | 3.267 | |
| 56 | 3.236 | 3.437 | 3.691 | 3.898 | 3.995 | 4.018 | 4.046 | 4.107 | 4.154 | 4.128 | 4.022 | 3.864 | 3.665 | 3.429 | 3.186 | 2.987 | 2.865 | |
| 57 | 2.841 | 3.013 | 3.234 | 3.415 | 3.502 | 3.524 | 3.552 | 3.607 | 3.649 | 3.625 | 3.529 | 3.386 | 3.208 | 2.999 | 2.786 | 2.614 | 2.510 | |
| 58 | 2.491 | 2.639 | 2.829 | 2.986 | 3.065 | 3.088 | 3.114 | 3.164 | 3.200 | 3.178 | 3.092 | 2.964 | 2.805 | 2.619 | 2.433 | 2.285 | 2.197 | |
| 59 | 2.183 | 2.308 | 2.471 | 2.607 | 2.678 | 2.701 | 2.727 | 2.771 | 2.802 | 2.782 | 2.705 | 2.590 | 2.448 | 2.284 | 2.122 | 1.994 | 1.920 | |
| 60 | 1.911 | 2.017 | 2.155 | 2.272 | 2.335 | 2.359 | 2.384 | 2.423 | 2.449 | 2.431 | 2.362 | 2.260 | 2.134 | 1.989 | 1.848 | 1.739 | 1.675 | |
| 61 | 1.671 | 1.760 | 1.876 | 1.977 | 2.033 | 2.058 | 2.082 | 2.116 | 2.137 | 2.120 | 2.060 | 1.970 | 1.857 | 1.730 | 1.607 | 1.513 | 1.460 | |
| 62 | 1.459 | 1.533 | 1.631 | 1.716 | 1.767 | 1.792 | 1.815 | 1.844 | 1.862 | 1.846 | 1.794 | 1.714 | 1.614 | 1.502 | 1.396 | 1.316 | 1.270 | |
| 63 | 1.272 | 1.334 | 1.415 | 1.487 | 1.533 | 1.558 | 1.580 | 1.605 | 1.619 | 1.605 | 1.559 | 1.489 | 1.401 | 1.303 | 1.211 | 1.142 | 1.102 | |
| 64 | 1.102 | 1.159 | 1.226 | 1.281 | 1.327 | 1.352 | 1.374 | 1.395 | 1.405 | 1.392 | 1.353 | 1.292 | 1.215 | 1.129 | 1.050 | 0.990 | 0.956 | |
| 65 | 0.963 | 1.006 | 1.061 | 1.111 | 1.147 | 1.171 | 1.192 | 1.210 | 1.217 | 1.206 | 1.173 | 1.120 | 1.052 | 0.977 | 0.908 | 0.857 | 0.827 | |
| 66 | 0.836 | 0.871 | 0.916 | 0.958 | 0.989 | 1.013 | 1.033 | 1.048 | 1.053 | 1.043 | 1.015 | 0.969 | 0.910 | 0.845 | 0.786 | 0.741 | 0.715 | |
| 67 | 7.241 | 7.536 | 7.901 | 8.239 | 8.18 | 8.750 | 8.938 | 9.061 | 9.091 | 9.003 | 8.770 | 8.378 | 7.858 | 7.295 | 6.787 | 6.403 | 6.173 | - 2 |
| 68 | 6.264 | 6.507 | 6.802 | 7.077 | 7.321 | 7.542 | 7.719 | 7.820 | 7.834 | 7.758 | 7.566 | 7.232 | 6.781 | 6.294 | 5.858 | 5.526 | 5.320 | |
| 69 | 5.408 | 5.610 | 5.846 | 6.068 | 6.282 | 6.489 | 6.653 | 6.736 | 6.738 | 6.674 | 6.517 | 6.234 | 5.845 | 5.426 | 5.052 | 4.764 | 4.580 | |
| 70 | 4.660 | 4.828 | 5.017 | 5.195 | 5.380 | 5.573 | 5.724 | 5.790 | 5.784 | 5.731 | 5.605 | 5.367 | 5.032 | 4.673 | 4.354 | 4.103 | 3.938 | |
| 71 | 4.007 | 4.147 | 4.278 | 4.440 | 4.600 | 4.777 | 4.914 | 4.966 | 4.955 | 4.911 | 4.813 | 4.614 | 4.328 | 4.021 | 3.749 | 3.531 | 3.382 | |
| 72 | 3.439 | 3.556 | 3.676 | 3.789 | 3.926 | 4.087 | 4.209 | 4.250 | 4.235 | 4.201 | 4.125 | 3.960 | 3.717 | 3.457 | 3.225 | 3.036 | 2.902 | |
| 73 | 2.944 | 3.042 | 3.139 | 3.229 | 3.346 | 3.489 | 3.597 | 3.628 | 3.612 | 3.586 | 3.529 | 3.394 | 3.188 | 2.968 | 2.773 | 2.608 | 2.487 | |
| 74 | 2.515 | 2.598 | 2.676 | 2.747 | 2.847 | 2.972 | 3.066 | 3.089 | 3.073 | 3.055 | 3.014 | 2.903 | 2.731 | 2.546 | 2.381 | 2.238 | 2.130 | |
| 75 | 2.144 | 2.214 | 2.277 | 2.334 | 2.418 | 2.527 | 2.607 | 2.624 | 2.609 | 2.597 | 2.569 | 2.479 | 2.335 | 2.181 | 2.042 | 1.919 | 1.822 | |
| 76 | 1.824 | 1.883 | 1.934 | 1.980 | 2.051 | 2.144 | 2.212 | 2.224 | 2.210 | 2.204 | 2.185 | 2.113 | 1.993 | 1.866 | 1.750 | 1.643 | 1.557 | |
| 77 | 1.549 | 1.599 | 1.641 | 1.677 | 1.737 | 1.816 | 1.872 | 1.880 | 1.869 | 1.867 | 1.856 | 1.798 | 1.699 | 1.594 | 1.493 | 1.406 | 1.329 | |
| 78 | 1.313 | 1.355 | 1.389 | 1.419 | 1.469 | 1.536 | 1.582 | 1.588 | 1.579 | 1.580 | 1.573 | 1.527 | 1.446 | 1.360 | 1.280 | 1.201 | 1.133 | |
| 79 | 1.111 | 1.147 | 1.175 | 1.199 | 1.241 | 1.297 | 1.335 | 1.339 | 1.333 | 1.336 | 1.333 | 1.295 | 1.228 | 1.158 | 1.093 | 1.026 | 0.965 | |
| 80 | 0.940 | 0.970 | 0.993 | 1.013 | 1.048 | 1.095 | 1.127 | 1.131 | 1.126 | 1.131 | 1.129 | 1.097 | 1.042 | 0.985 | 0.933 | 0.875 | 0.822 | |

(1 MBAR = 100 NEWTON/M SQ)

APRIL                                    ZONAL MEAN PRESSURE (MB)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.605 | 6.788 | 7.065 | 7.372 | 7.625 | 7.772 | 7.825 | 7.832 | 7.821 | 7.788 | 7.719 | 7.613 | 7.490 | 7.381 | 7.318 | 7.308 | 7.328 | + 1 |
| 19 | 5.625 | 5.801 | 6.051 | 6.311 | 6.510 | 6.615 | 6.642 | 6.634 | 6.618 | 6.595 | 6.551 | 6.481 | 6.394 | 6.318 | 6.277 | 6.277 | 6.300 | |
| 20 | 4.782 | 4.952 | 5.180 | 5.402 | 5.560 | 5.634 | 5.644 | 5.627 | 5.610 | 5.594 | 5.568 | 5.522 | 5.461 | 5.407 | 5.382 | 5.389 | 5.412 | |
| 21 | 4.060 | 4.223 | 4.433 | 4.624 | 4.751 | 4.804 | 4.804 | 4.782 | 4.764 | 4.754 | 4.741 | 4.711 | 4.667 | 4.628 | 4.613 | 4.626 | 4.649 | |
| 22 | 3.444 | 3.599 | 3.791 | 3.959 | 4.063 | 4.103 | 4.096 | 4.072 | 4.054 | 4.049 | 4.044 | 4.025 | 3.991 | 3.962 | 3.954 | 3.970 | 3.994 | |
| 23 | 2.919 | 3.065 | 3.241 | 3.389 | 3.470 | 3.508 | 3.499 | 3.475 | 3.458 | 3.455 | 3.456 | 3.443 | 3.416 | 3.392 | 3.390 | 3.408 | 3.431 | |
| 24 | 2.474 | 2.609 | 2.770 | 2.901 | 2.979 | 3.005 | 2.995 | 2.972 | 2.955 | 2.955 | 2.959 | 2.950 | 2.926 | 2.906 | 2.906 | 2.925 | 2.948 | |
| 25 | 2.097 | 2.220 | 2.366 | 2.484 | 2.553 | 2.577 | 2.569 | 2.546 | 2.531 | 2.533 | 2.539 | 2.531 | 2.509 | 2.490 | 2.492 | 2.511 | 2.533 | |
| 26 | 1.777 | 1.889 | 2.021 | 2.127 | 2.190 | 2.213 | 2.207 | 2.186 | 2.173 | 2.175 | 2.181 | 2.174 | 2.153 | 2.136 | 2.138 | 2.157 | 2.176 | |
| 27 | 1.502 | 1.608 | 1.726 | 1.822 | 1.880 | 1.903 | 1.899 | 1.881 | 1.869 | 1.871 | 1.877 | 1.870 | 1.850 | 1.834 | 1.836 | 1.853 | 1.870 | |
| 28 | 1.279 | 1.368 | 1.474 | 1.561 | 1.616 | 1.639 | 1.636 | 1.621 | 1.610 | 1.613 | 1.618 | 1.611 | 1.592 | 1.576 | 1.577 | 1.592 | 1.607 | |
| 29 | 1.086 | 1.165 | 1.260 | 1.339 | 1.389 | 1.412 | 1.412 | 1.399 | 1.390 | 1.392 | 1.397 | 1.390 | 1.372 | 1.357 | 1.357 | 1.369 | 1.382 | |
| 30 | 0.923 | 0.993 | 1.077 | 1.148 | 1.196 | 1.219 | 1.220 | 1.210 | 1.202 | 1.204 | 1.208 | 1.201 | 1.184 | 1.169 | 1.168 | 1.178 | 1.188 | |
| 31 | 0.786 | 0.847 | 0.921 | 0.986 | 1.030 | 1.053 | 1.056 | 1.048 | 1.041 | 1.043 | 1.046 | 1.039 | 1.023 | 1.009 | 1.007 | 1.014 | 1.022 | |
| 32 | 6.692 | 7.226 | 7.885 | 8.472 | 8.886 | 9.107 | 9.151 | 9.090 | 9.038 | 9.050 | 9.069 | 9.004 | 8.858 | 8.730 | 8.695 | 8.741 | 8.801 | + 0 |
| 33 | 5.716 | 6.176 | 6.757 | 7.288 | 7.673 | 7.886 | 7.940 | 7.898 | 7.857 | 7.865 | 7.875 | 7.814 | 7.683 | 7.562 | 7.519 | 7.543 | 7.583 | |
| 34 | 4.887 | 5.286 | 5.799 | 6.278 | 6.634 | 6.837 | 6.899 | 6.873 | 6.842 | 6.846 | 6.849 | 6.792 | 6.675 | 6.564 | 6.512 | 6.518 | 6.541 | |
| 35 | 4.186 | 4.531 | 4.983 | 5.415 | 5.743 | 5.936 | 6.002 | 5.991 | 5.968 | 5.968 | 5.965 | 5.913 | 5.810 | 5.708 | 5.651 | 5.640 | 5.650 | |
| 36 | 3.592 | 3.891 | 4.289 | 4.678 | 4.980 | 5.161 | 5.230 | 5.229 | 5.214 | 5.212 | 5.204 | 5.155 | 5.066 | 4.973 | 4.912 | 4.889 | 4.887 | |
| 37 | 3.088 | 3.347 | 3.698 | 4.048 | 4.324 | 4.493 | 4.563 | 4.571 | 4.563 | 4.558 | 4.546 | 4.502 | 4.425 | 4.341 | 4.278 | 4.245 | 4.233 | |
| 38 | 2.660 | 2.884 | 3.194 | 3.509 | 3.761 | 3.917 | 3.987 | 4.002 | 3.999 | 3.992 | 3.978 | 3.938 | 3.872 | 3.796 | 3.732 | 3.692 | 3.673 | |
| 39 | 2.295 | 2.490 | 2.764 | 3.047 | 3.276 | 3.420 | 3.488 | 3.509 | 3.510 | 3.502 | 3.485 | 3.450 | 3.394 | 3.326 | 3.263 | 3.217 | 3.193 | |
| 40 | 1.985 | 2.154 | 2.396 | 2.650 | 2.858 | 2.990 | 3.056 | 3.081 | 3.085 | 3.076 | 3.058 | 3.027 | 2.980 | 2.919 | 2.857 | 2.809 | 2.781 | |
| 41 | 1.720 | 1.867 | 2.080 | 2.309 | 2.497 | 2.618 | 2.681 | 2.709 | 2.715 | 2.706 | 2.687 | 2.659 | 2.619 | 2.565 | 2.506 | 2.456 | 2.427 | |
| 42 | 1.493 | 1.621 | 1.810 | 2.015 | 2.185 | 2.296 | 2.355 | 2.384 | 2.392 | 2.383 | 2.364 | 2.339 | 2.306 | 2.258 | 2.201 | 2.152 | 2.121 | |
| 43 | 1.298 | 1.410 | 1.577 | 1.761 | 1.915 | 2.015 | 2.071 | 2.101 | 2.110 | 2.101 | 2.082 | 2.060 | 2.032 | 1.990 | 1.936 | 1.888 | 1.858 | |
| 44 | 1.131 | 1.229 | 1.376 | 1.541 | 1.680 | 1.771 | 1.824 | 1.853 | 1.863 | 1.854 | 1.835 | 1.816 | 1.792 | 1.755 | 1.705 | 1.659 | 1.629 | |
| 45 | 0.987 | 1.072 | 1.203 | 1.350 | 1.475 | 1.558 | 1.607 | 1.635 | 1.646 | 1.637 | 1.619 | 1.602 | 1.582 | 1.549 | 1.504 | 1.459 | 1.431 | |
| 46 | 0.863 | 0.937 | 1.052 | 1.184 | 1.297 | 1.372 | 1.417 | 1.444 | 1.455 | 1.446 | 1.429 | 1.414 | 1.397 | 1.369 | 1.327 | 1.285 | 1.258 | |
| 47 | 0.755 | 0.819 | 0.921 | 1.039 | 1.141 | 1.209 | 1.250 | 1.276 | 1.286 | 1.278 | 1.262 | 1.248 | 1.235 | 1.209 | 1.171 | 1.133 | 1.108 | |
| 48 | 0.661 | 0.717 | 0.807 | 0.913 | 1.004 | 1.066 | 1.103 | 1.128 | 1.137 | 1.130 | 1.114 | 1.102 | 1.091 | 1.069 | 1.034 | 0.999 | 0.976 | |
| 49 | 0.580 | 0.629 | 0.708 | 0.802 | 0.884 | 0.940 | 0.974 | 0.997 | 1.006 | 0.999 | 0.984 | 0.973 | 0.964 | 0.945 | 0.914 | 0.881 | 0.860 | |
| 50 | 5.088 | 5.513 | 6.210 | 7.045 | 7.784 | 8.285 | 8.598 | 8.807 | 8.890 | 8.823 | 8.690 | 8.594 | 8.516 | 8.349 | 8.068 | 7.777 | 7.586 | - 1 |
| 51 | 4.468 | 4.835 | 5.447 | 6.190 | 6.852 | 7.304 | 7.588 | 7.779 | 7.855 | 7.792 | 7.669 | 7.585 | 7.520 | 7.374 | 7.122 | 6.860 | 6.688 | |
| 52 | 3.926 | 4.242 | 4.778 | 5.436 | 6.030 | 6.436 | 6.693 | 6.866 | 6.935 | 6.877 | 6.764 | 6.690 | 6.636 | 6.509 | 6.284 | 6.049 | 5.895 | |
| 53 | 3.450 | 3.721 | 4.189 | 4.772 | 5.302 | 5.668 | 5.900 | 6.058 | 6.118 | 6.063 | 5.961 | 5.896 | 5.851 | 5.741 | 5.541 | 5.331 | 5.193 | |
| 54 | 3.032 | 3.264 | 3.671 | 4.186 | 4.659 | 4.988 | 5.196 | 5.336 | 5.391 | 5.341 | 5.248 | 5.191 | 5.154 | 5.058 | 4.881 | 4.694 | 4.572 | |
| 55 | 2.664 | 2.862 | 3.215 | 3.668 | 4.090 | 4.385 | 4.572 | 4.697 | 4.744 | 4.698 | 4.615 | 4.566 | 4.536 | 4.452 | 4.295 | 4.128 | 4.021 | |
| 56 | 2.340 | 2.508 | 2.813 | 3.211 | 3.586 | 3.850 | 4.018 | 4.128 | 4.169 | 4.127 | 4.054 | 4.011 | 3.986 | 3.914 | 3.774 | 3.627 | 3.532 | |
| 57 | 2.055 | 2.197 | 2.459 | 2.807 | 3.140 | 3.377 | 3.526 | 3.624 | 3.658 | 3.620 | 3.556 | 3.519 | 3.499 | 3.436 | 3.313 | 3.183 | 3.099 | |
| 58 | 1.804 | 1.922 | 2.148 | 2.452 | 2.746 | 2.957 | 3.090 | 3.176 | 3.205 | 3.171 | 3.114 | 3.084 | 3.068 | 3.012 | 2.904 | 2.789 | 2.716 | |
| 59 | 1.582 | 1.681 | 1.874 | 2.138 | 2.397 | 2.586 | 2.704 | 2.778 | 2.803 | 2.772 | 2.724 | 2.699 | 2.685 | 2.637 | 2.542 | 2.441 | 2.376 | |
| 60 | 1.386 | 1.469 | 1.633 | 1.862 | 2.090 | 2.258 | 2.363 | 2.427 | 2.446 | 2.420 | 2.379 | 2.358 | 2.347 | 2.305 | 2.222 | 2.133 | 2.076 | |
| 61 | 1.214 | 1.282 | 1.421 | 1.619 | 1.819 | 1.968 | 2.061 | 2.131 | 2.131 | 2.108 | 2.074 | 2.058 | 2.049 | 2.012 | 1.939 | 1.861 | 1.811 | |
| 62 | 1.062 | 1.118 | 1.236 | 1.406 | 1.581 | 1.713 | 1.795 | 1.841 | 1.853 | 1.834 | 1.806 | 1.793 | 1.786 | 1.753 | 1.690 | 1.622 | 1.578 | |
| 63 | 0.928 | 0.974 | 1.073 | 1.219 | 1.371 | 1.489 | 1.561 | 1.599 | 1.608 | 1.592 | 1.570 | 1.560 | 1.554 | 1.526 | 1.470 | 1.412 | 1.373 | |
| 64 | 0.809 | 0.848 | 0.931 | 1.055 | 1.188 | 1.292 | 1.355 | 1.386 | 1.393 | 1.379 | 1.363 | 1.356 | 1.350 | 1.325 | 1.278 | 1.227 | 1.193 | |
| 65 | 0.706 | 0.737 | 0.807 | 0.912 | 1.027 | 1.119 | 1.174 | 1.200 | 1.204 | 1.193 | 1.181 | 1.176 | 1.171 | 1.150 | 1.109 | 1.065 | 1.035 | |
| 66 | 0.614 | 0.641 | 0.699 | 0.788 | 0.887 | 0.967 | 1.015 | 1.036 | 1.038 | 1.030 | 1.022 | 1.019 | 1.015 | 0.996 | 0.961 | 0.923 | 0.897 | |
| 67 | 5.344 | 5.559 | 6.042 | 6.796 | 7.650 | 8.351 | 8.766 | 8.928 | 8.936 | 8.877 | 8.829 | 8.818 | 8.779 | 8.614 | 8.318 | 7.996 | 7.766 | - 2 |
| 68 | 4.642 | 4.820 | 5.221 | 5.855 | 6.586 | 7.198 | 7.555 | 7.680 | 7.676 | 7.636 | 7.616 | 7.618 | 7.582 | 7.439 | 7.190 | 6.916 | 6.715 | |
| 69 | 4.028 | 4.176 | 4.508 | 5.038 | 5.662 | 6.194 | 6.499 | 6.593 | 6.580 | 6.556 | 6.558 | 6.570 | 6.537 | 6.415 | 6.206 | 5.975 | 5.799 | |
| 70 | 3.491 | 3.614 | 3.888 | 4.329 | 4.860 | 5.320 | 5.581 | 5.648 | 5.629 | 5.618 | 5.637 | 5.657 | 5.628 | 5.523 | 5.350 | 5.154 | 5.001 | |
| 71 | 3.022 | 3.125 | 3.350 | 3.717 | 4.166 | 4.562 | 4.783 | 4.829 | 4.806 | 4.804 | 4.837 | 4.861 | 4.836 | 4.747 | 4.604 | 4.440 | 4.306 | |
| 72 | 2.613 | 2.699 | 2.884 | 3.187 | 3.566 | 3.905 | 4.090 | 4.121 | 4.096 | 4.101 | 4.142 | 4.170 | 4.149 | 4.074 | 3.957 | 3.819 | 3.702 | |
| 73 | 2.258 | 2.329 | 2.480 | 2.730 | 3.047 | 3.336 | 3.491 | 3.509 | 3.483 | 3.493 | 3.539 | 3.569 | 3.552 | 3.490 | 3.395 | 3.279 | 3.177 | |
| 74 | 1.949 | 2.008 | 2.131 | 2.335 | 2.600 | 2.844 | 2.973 | 2.982 | 2.957 | 2.970 | 3.017 | 3.049 | 3.035 | 2.984 | 2.907 | 2.810 | 2.721 | |
| 75 | 1.681 | 1.729 | 1.829 | 1.996 | 2.215 | 2.420 | 2.527 | 2.530 | 2.506 | 2.521 | 2.567 | 2.598 | 2.588 | 2.547 | 2.484 | 2.403 | 2.325 | |
| 76 | 1.448 | 1.488 | 1.568 | 1.703 | 1.885 | 2.056 | 2.144 | 2.143 | 2.121 | 2.136 | 2.180 | 2.209 | 2.202 | 2.169 | 2.119 | 2.049 | 1.981 | |
| 77 | 1.248 | 1.279 | 1.343 | 1.453 | 1.602 | 1.743 | 1.815 | 1.813 | 1.794 | 1.808 | 1.847 | 1.874 | 1.870 | 1.844 | 1.803 | 1.744 | 1.684 | |
| 78 | 1.074 | 1.099 | 1.150 | 1.238 | 1.359 | 1.476 | 1.535 | 1.532 | 1.516 | 1.529 | 1.563 | 1.586 | 1.584 | 1.564 | 1.530 | 1.480 | 1.427 | |
| 79 | 0.925 | 0.945 | 0.984 | 1.054 | 1.153 | 1.249 | 1.297 | 1.295 | 1.282 | 1.293 | 1.322 | 1.341 | 1.339 | 1.323 | 1.295 | 1.252 | 1.206 | |
| 80 | 0.792 | 0.812 | 0.842 | 0.898 | 0.978 | 1.056 | 1.097 | 1.096 | 1.086 | 1.095 | 1.118 | 1.133 | 1.131 | 1.117 | 1.094 | 1.057 | 1.018 | |

(1 MBAR = 100 NEWTON/M SQ)

MAY                                    ZONAL MEAN PRESSURE (MB)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.226 | 6.535 | 6.900 | 7.222 | 7.481 | 7.682 | 7.803 | 7.839 | 7.831 | 7.821 | 7.800 | 7.737 | 7.646 | 7.577 | 7.559 | 7.569 | 7.577 | + 1 |
| 19 | 5.238 | 5.536 | 5.884 | 6.177 | 6.392 | 6.542 | 6.625 | 6.643 | 6.632 | 6.627 | 6.620 | 6.585 | 6.529 | 6.491 | 6.490 | 6.508 | 6.521 |
| 20 | 4.391 | 4.678 | 5.011 | 5.282 | 5.464 | 5.576 | 5.631 | 5.638 | 5.627 | 5.626 | 5.628 | 5.613 | 5.581 | 5.561 | 5.570 | 5.593 | 5.609 |
| 21 | 3.674 | 3.946 | 4.263 | 4.515 | 4.672 | 4.758 | 4.794 | 4.794 | 4.784 | 4.786 | 4.795 | 4.792 | 4.775 | 4.767 | 4.781 | 4.806 | 4.824 |
| 22 | 3.070 | 3.325 | 3.623 | 3.858 | 3.997 | 4.065 | 4.089 | 4.085 | 4.075 | 4.080 | 4.093 | 4.097 | 4.089 | 4.087 | 4.104 | 4.130 | 4.150 |
| 23 | 2.565 | 2.799 | 3.076 | 3.295 | 3.421 | 3.478 | 3.493 | 3.487 | 3.479 | 3.486 | 3.501 | 3.509 | 3.506 | 3.507 | 3.524 | 3.550 | 3.570 |
| 24 | 2.144 | 2.356 | 2.610 | 2.813 | 2.929 | 2.979 | 2.990 | 2.983 | 2.976 | 2.984 | 3.000 | 3.009 | 3.009 | 3.011 | 3.027 | 3.052 | 3.073 |
| 25 | 1.795 | 1.983 | 2.213 | 2.400 | 2.509 | 2.555 | 2.564 | 2.556 | 2.551 | 2.559 | 2.575 | 2.585 | 2.585 | 2.587 | 2.602 | 2.626 | 2.646 |
| 26 | 1.504 | 1.670 | 1.875 | 2.047 | 2.150 | 2.194 | 2.202 | 2.195 | 2.191 | 2.199 | 2.214 | 2.223 | 2.223 | 2.225 | 2.239 | 2.261 | 2.280 |
| 27 | 1.263 | 1.407 | 1.589 | 1.746 | 1.843 | 1.885 | 1.894 | 1.889 | 1.886 | 1.893 | 1.906 | 1.914 | 1.914 | 1.916 | 1.928 | 1.948 | 1.966 |
| 28 | 1.063 | 1.187 | 1.347 | 1.489 | 1.580 | 1.622 | 1.632 | 1.628 | 1.626 | 1.633 | 1.644 | 1.651 | 1.651 | 1.652 | 1.662 | 1.681 | 1.697 |
| 29 | 0.897 | 1.003 | 1.142 | 1.269 | 1.355 | 1.397 | 1.408 | 1.406 | 1.404 | 1.410 | 1.420 | 1.425 | 1.425 | 1.426 | 1.435 | 1.451 | 1.466 |
| 30 | 0.758 | 0.848 | 0.969 | 1.083 | 1.163 | 1.204 | 1.217 | 1.216 | 1.215 | 1.220 | 1.228 | 1.232 | 1.232 | 1.233 | 1.241 | 1.255 | 1.268 |
| 31 | 0.643 | 0.719 | 0.822 | 0.924 | 0.999 | 1.039 | 1.053 | 1.053 | 1.053 | 1.057 | 1.063 | 1.067 | 1.066 | 1.067 | 1.074 | 1.086 | 1.098 |
| 32 | 5.464 | 6.101 | 6.992 | 7.892 | 8.583 | 8.977 | 9.122 | 9.138 | 9.137 | 9.171 | 9.222 | 9.249 | 9.247 | 9.255 | 9.314 | 9.421 | 9.525 | + 0 |
| 33 | 4.655 | 5.190 | 5.952 | 6.747 | 7.383 | 7.762 | 7.914 | 7.940 | 7.943 | 7.969 | 8.009 | 8.031 | 8.030 | 8.039 | 8.091 | 8.182 | 8.270 |
| 34 | 3.976 | 4.424 | 5.074 | 5.775 | 6.356 | 6.720 | 6.876 | 6.876 | 6.910 | 6.915 | 6.935 | 6.966 | 6.984 | 6.985 | 6.995 | 7.040 | 7.117 | 7.192 |
| 35 | 3.405 | 3.779 | 4.334 | 4.949 | 5.479 | 5.824 | 5.982 | 6.023 | 6.029 | 6.043 | 6.067 | 6.082 | 6.086 | 6.098 | 6.137 | 6.201 | 6.264 |
| 36 | 2.922 | 3.235 | 3.709 | 4.249 | 4.729 | 5.054 | 5.211 | 5.256 | 5.263 | 5.274 | 5.291 | 5.305 | 5.312 | 5.325 | 5.359 | 5.412 | 5.464 |
| 37 | 2.514 | 2.776 | 3.180 | 3.653 | 4.088 | 4.392 | 4.545 | 4.594 | 4.602 | 4.608 | 4.622 | 4.635 | 4.644 | 4.658 | 4.688 | 4.732 | 4.775 |
| 38 | 2.168 | 2.388 | 2.733 | 3.147 | 3.539 | 3.822 | 3.970 | 4.020 | 4.028 | 4.032 | 4.043 | 4.055 | 4.067 | 4.082 | 4.108 | 4.144 | 4.179 |
| 39 | 1.874 | 2.058 | 2.353 | 2.716 | 3.068 | 3.331 | 3.472 | 3.522 | 3.531 | 3.533 | 3.541 | 3.553 | 3.567 | 3.583 | 3.606 | 3.636 | 3.663 |
| 40 | 1.623 | 1.778 | 2.031 | 2.348 | 2.665 | 2.906 | 3.041 | 3.090 | 3.098 | 3.099 | 3.106 | 3.118 | 3.133 | 3.150 | 3.170 | 3.194 | 3.216 |
| 41 | 1.408 | 1.539 | 1.756 | 2.035 | 2.318 | 2.540 | 2.666 | 2.714 | 2.722 | 2.722 | 2.728 | 2.740 | 2.756 | 2.773 | 2.791 | 2.811 | 2.828 |
| 42 | 1.224 | 1.335 | 1.522 | 1.766 | 2.020 | 2.222 | 2.340 | 2.386 | 2.393 | 2.393 | 2.398 | 2.411 | 2.427 | 2.444 | 2.461 | 2.477 | 2.491 |
| 43 | 1.066 | 1.161 | 1.322 | 1.536 | 1.762 | 1.947 | 2.057 | 2.099 | 2.107 | 2.106 | 2.111 | 2.123 | 2.140 | 2.157 | 2.172 | 2.186 | 2.196 |
| 44 | 0.930 | 1.011 | 1.150 | 1.337 | 1.540 | 1.707 | 1.809 | 1.849 | 1.856 | 1.855 | 1.860 | 1.872 | 1.889 | 1.905 | 1.919 | 1.931 | 1.939 |
| 45 | 0.813 | 0.882 | 1.002 | 1.167 | 1.347 | 1.499 | 1.592 | 1.630 | 1.636 | 1.635 | 1.639 | 1.652 | 1.669 | 1.685 | 1.698 | 1.707 | 1.714 |
| 46 | 0.711 | 0.770 | 0.874 | 1.019 | 1.180 | 1.317 | 1.403 | 1.437 | 1.443 | 1.442 | 1.446 | 1.459 | 1.475 | 1.490 | 1.502 | 1.511 | 1.517 |
| 47 | 0.623 | 0.674 | 0.764 | 0.891 | 1.034 | 1.158 | 1.237 | 1.268 | 1.273 | 1.272 | 1.276 | 1.289 | 1.304 | 1.319 | 1.330 | 1.338 | 1.343 |
| 48 | 0.546 | 0.590 | 0.669 | 0.780 | 0.907 | 1.019 | 1.090 | 1.119 | 1.123 | 1.122 | 1.127 | 1.138 | 1.154 | 1.168 | 1.178 | 1.186 | 1.190 |
| 49 | 0.479 | 0.517 | 0.586 | 0.683 | 0.796 | 0.896 | 0.962 | 0.988 | 0.991 | 0.990 | 0.995 | 1.006 | 1.020 | 1.034 | 1.044 | 1.051 | 1.055 |
| 50 | 4.210 | 4.540 | 5.134 | 5.988 | 6.985 | 7.889 | 8.481 | 8.721 | 8.748 | 8.736 | 8.780 | 8.887 | 9.022 | 9.148 | 9.245 | 9.311 | 9.348 | - 1 |
| 51 | 3.699 | 3.986 | 4.503 | 5.249 | 6.131 | 6.941 | 7.479 | 7.696 | 7.717 | 7.705 | 7.747 | 7.849 | 7.975 | 8.093 | 8.187 | 8.251 | 8.287 |
| 52 | 3.251 | 3.501 | 3.950 | 4.602 | 5.380 | 6.105 | 6.592 | 6.789 | 6.805 | 6.792 | 6.832 | 6.928 | 7.045 | 7.156 | 7.246 | 7.309 | 7.345 |
| 53 | 2.858 | 3.076 | 3.466 | 4.035 | 4.719 | 5.367 | 5.807 | 5.985 | 5.997 | 5.983 | 6.021 | 6.110 | 6.219 | 6.323 | 6.408 | 6.471 | 6.508 |
| 54 | 2.513 | 2.703 | 3.042 | 3.536 | 4.138 | 4.715 | 5.112 | 5.272 | 5.280 | 5.266 | 5.301 | 5.384 | 5.485 | 5.581 | 5.663 | 5.725 | 5.762 |
| 55 | 2.209 | 2.375 | 2.669 | 3.098 | 3.625 | 4.138 | 4.495 | 4.639 | 4.644 | 4.630 | 4.663 | 4.740 | 4.832 | 4.921 | 5.000 | 5.061 | 5.099 |
| 56 | 1.941 | 2.086 | 2.341 | 2.713 | 3.173 | 3.628 | 3.949 | 4.078 | 4.080 | 4.067 | 4.097 | 4.167 | 4.252 | 4.334 | 4.409 | 4.470 | 4.507 |
| 57 | 1.704 | 1.831 | 2.052 | 2.373 | 2.775 | 3.177 | 3.464 | 3.579 | 3.580 | 3.567 | 3.595 | 3.659 | 3.736 | 3.812 | 3.883 | 3.943 | 3.980 |
| 58 | 1.496 | 1.607 | 1.798 | 2.075 | 2.424 | 2.779 | 3.035 | 3.137 | 3.136 | 3.124 | 3.150 | 3.209 | 3.278 | 3.347 | 3.413 | 3.473 | 3.511 |
| 59 | 1.312 | 1.410 | 1.574 | 1.813 | 2.115 | 2.427 | 2.654 | 2.745 | 2.742 | 2.731 | 2.756 | 2.810 | 2.872 | 2.935 | 2.999 | 3.056 | 3.092 |
| 60 | 1.150 | 1.235 | 1.378 | 1.582 | 1.844 | 2.117 | 2.318 | 2.397 | 2.394 | 2.384 | 2.408 | 2.456 | 2.512 | 2.569 | 2.630 | 2.684 | 2.720 |
| 61 | 1.006 | 1.082 | 1.204 | 1.380 | 1.605 | 1.843 | 2.020 | 2.089 | 2.085 | 2.078 | 2.100 | 2.144 | 2.193 | 2.245 | 2.302 | 2.354 | 2.388 |
| 62 | 0.880 | 0.946 | 1.052 | 1.202 | 1.396 | 1.603 | 1.757 | 1.817 | 1.813 | 1.807 | 1.829 | 1.868 | 1.911 | 1.958 | 2.012 | 2.061 | 2.094 |
| 63 | 0.769 | 0.827 | 0.918 | 1.046 | 1.212 | 1.392 | 1.526 | 1.577 | 1.573 | 1.569 | 1.590 | 1.625 | 1.663 | 1.705 | 1.755 | 1.802 | 1.833 |
| 64 | 0.671 | 0.722 | 0.801 | 0.910 | 1.052 | 1.206 | 1.322 | 1.365 | 1.361 | 1.359 | 1.380 | 1.412 | 1.444 | 1.482 | 1.528 | 1.572 | 1.601 |
| 65 | 0.584 | 0.630 | 0.698 | 0.790 | 0.911 | 1.044 | 1.143 | 1.179 | 1.175 | 1.175 | 1.195 | 1.224 | 1.252 | 1.285 | 1.328 | 1.369 | 1.396 |
| 66 | 0.509 | 0.549 | 0.607 | 0.686 | 0.789 | 0.902 | 0.986 | 1.016 | 1.012 | 1.014 | 1.033 | 1.059 | 1.083 | 1.112 | 1.151 | 1.190 | 1.215 |
| 67 | 0.442 | 0.478 | 0.528 | 0.595 | 0.682 | 0.778 | 0.849 | 0.873 | 0.870 | 0.873 | 0.892 | 0.915 | 0.935 | 0.961 | 0.997 | 1.032 | 1.055 |
| 68 | 3.842 | 4.152 | 4.587 | 5.152 | 5.891 | 6.704 | 7.294 | 7.481 | 7.453 | 7.500 | 7.683 | 7.883 | 8.052 | 8.279 | 8.609 | 8.938 | 9.140 | - 2 |
| 69 | 3.334 | 3.606 | 3.980 | 4.458 | 5.082 | 5.764 | 6.252 | 6.396 | 6.372 | 6.429 | 6.604 | 6.781 | 6.922 | 7.120 | 7.420 | 7.721 | 7.901 |
| 70 | 2.891 | 3.128 | 3.450 | 3.854 | 4.377 | 4.948 | 5.346 | 5.455 | 5.435 | 5.499 | 5.665 | 5.820 | 5.936 | 6.109 | 6.381 | 6.653 | 6.813 |
| 71 | 2.504 | 2.712 | 2.987 | 3.327 | 3.765 | 4.240 | 4.562 | 4.641 | 4.625 | 4.693 | 4.849 | 4.984 | 5.079 | 5.230 | 5.475 | 5.720 | 5.859 |
| 72 | 2.168 | 2.348 | 2.583 | 2.869 | 3.234 | 3.626 | 3.884 | 3.940 | 3.927 | 3.997 | 4.140 | 4.257 | 4.335 | 4.466 | 4.685 | 4.904 | 5.025 |
| 73 | 1.876 | 2.032 | 2.232 | 2.470 | 2.773 | 3.095 | 3.300 | 3.338 | 3.328 | 3.397 | 3.527 | 3.627 | 3.690 | 3.804 | 3.999 | 4.192 | 4.296 |
| 74 | 1.622 | 1.756 | 1.925 | 2.124 | 2.374 | 2.636 | 2.799 | 2.822 | 2.815 | 2.881 | 2.998 | 3.082 | 3.133 | 3.231 | 3.403 | 3.573 | 3.660 |
| 75 | 1.403 | 1.517 | 1.659 | 1.823 | 2.028 | 2.241 | 2.369 | 2.382 | 2.377 | 2.439 | 2.542 | 2.612 | 2.652 | 2.737 | 2.888 | 3.034 | 3.107 |
| 76 | 1.213 | 1.310 | 1.428 | 1.563 | 1.730 | 1.902 | 2.001 | 2.009 | 2.006 | 2.062 | 2.151 | 2.208 | 2.239 | 2.311 | 2.442 | 2.567 | 2.627 |
| 77 | 1.048 | 1.130 | 1.228 | 1.338 | 1.473 | 1.611 | 1.689 | 1.692 | 1.691 | 1.741 | 1.816 | 1.862 | 1.886 | 1.946 | 2.058 | 2.164 | 2.212 |
| 78 | 0.906 | 0.974 | 1.055 | 1.144 | 1.253 | 1.363 | 1.424 | 1.426 | 1.426 | 1.469 | 1.532 | 1.567 | 1.584 | 1.633 | 1.728 | 1.815 | 1.853 |
| 79 | 0.783 | 0.840 | 0.906 | 0.977 | 1.065 | 1.153 | 1.201 | 1.201 | 1.203 | 1.240 | 1.290 | 1.316 | 1.327 | 1.367 | 1.444 | 1.516 | 1.545 |
| 80 | 0.677 | 0.724 | 0.778 | 0.836 | 0.905 | 0.976 | 1.013 | 1.014 | 1.016 | 1.047 | 1.088 | 1.105 | 1.110 | 1.140 | 1.202 | 1.259 | 1.281 |

(1 MBAR = 100 NEWTON/M SQ)

30

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.917 | 6.309 | 6.764 | 7.141 | 7.424 | 7.647 | 7.801 | 7.858 | 7.843 | 7.823 | 7.828 | 7.833 | 7.810 | 7.774 | 7.758 | 7.772 | 7.797 + 1 |
| 19 | 4.925 | 5.297 | 5.736 | 6.098 | 6.349 | 6.523 | 6.631 | 6.666 | 6.651 | 6.636 | 6.647 | 6.667 | 6.671 | 6.665 | 6.671 | 6.697 | 6.725 |
| 20 | 4.077 | 4.431 | 4.855 | 5.204 | 5.432 | 5.569 | 5.643 | 5.664 | 5.651 | 5.641 | 5.657 | 5.685 | 5.706 | 5.718 | 5.738 | 5.770 | 5.801 |
| 21 | 3.364 | 3.696 | 4.102 | 4.439 | 4.649 | 4.759 | 4.810 | 4.820 | 4.810 | 4.807 | 4.825 | 4.858 | 4.887 | 4.909 | 4.936 | 4.971 | 5.005 |
| 22 | 2.773 | 3.079 | 3.461 | 3.783 | 3.980 | 4.071 | 4.105 | 4.110 | 4.103 | 4.104 | 4.124 | 4.158 | 4.190 | 4.218 | 4.248 | 4.285 | 4.320 |
| 23 | 2.287 | 2.563 | 2.917 | 3.222 | 3.408 | 3.487 | 3.510 | 3.511 | 3.507 | 3.511 | 3.531 | 3.564 | 3.597 | 3.626 | 3.657 | 3.694 | 3.729 |
| 24 | 1.889 | 2.134 | 2.456 | 2.743 | 2.918 | 2.990 | 3.006 | 3.004 | 3.002 | 3.009 | 3.029 | 3.060 | 3.092 | 3.121 | 3.151 | 3.187 | 3.221 |
| 25 | 1.563 | 1.779 | 2.068 | 2.333 | 2.499 | 2.565 | 2.578 | 2.576 | 2.575 | 2.583 | 2.602 | 2.630 | 2.660 | 2.688 | 2.717 | 2.752 | 2.784 |
| 26 | 1.298 | 1.485 | 1.741 | 1.983 | 2.139 | 2.203 | 2.214 | 2.212 | 2.213 | 2.221 | 2.239 | 2.264 | 2.291 | 2.317 | 2.345 | 2.378 | 2.408 |
| 27 | 1.081 | 1.242 | 1.467 | 1.685 | 1.831 | 1.893 | 1.905 | 1.903 | 1.904 | 1.913 | 1.929 | 1.951 | 1.976 | 2.000 | 2.026 | 2.056 | 2.085 |
| 28 | 0.904 | 1.041 | 1.237 | 1.432 | 1.567 | 1.628 | 1.641 | 1.640 | 1.642 | 1.649 | 1.664 | 1.684 | 1.706 | 1.728 | 1.752 | 1.781 | 1.807 |
| 29 | 0.759 | 0.875 | 1.044 | 1.216 | 1.341 | 1.400 | 1.415 | 1.415 | 1.417 | 1.424 | 1.437 | 1.454 | 1.474 | 1.495 | 1.518 | 1.544 | 1.567 |
| 30 | 0.640 | 0.738 | 0.882 | 1.034 | 1.148 | 1.205 | 1.222 | 1.224 | 1.225 | 1.231 | 1.243 | 1.258 | 1.276 | 1.295 | 1.316 | 1.340 | 1.361 |
| 31 | 0.541 | 0.624 | 0.747 | 0.879 | 0.982 | 1.038 | 1.057 | 1.059 | 1.061 | 1.066 | 1.076 | 1.090 | 1.106 | 1.123 | 1.143 | 1.165 | 1.184 |
| 32 | 0.459 | 0.529 | 0.634 | 0.748 | 0.841 | 0.895 | 0.915 | 0.919 | 0.920 | 0.924 | 0.933 | 0.945 | 0.959 | 0.976 | 0.995 | 1.014 | 1.031 |
| 33 | 3.915 | 4.500 | 5.385 | 6.375 | 7.210 | 7.723 | 7.934 | 7.977 | 7.983 | 8.019 | 8.097 | 8.206 | 8.337 | 8.491 | 8.666 | 8.845 | 8.985 + 0 |
| 34 | 3.347 | 3.839 | 4.588 | 5.439 | 6.184 | 6.670 | 6.887 | 6.937 | 6.939 | 6.968 | 7.037 | 7.135 | 7.255 | 7.398 | 7.563 | 7.725 | 7.846 |
| 35 | 2.871 | 3.286 | 3.919 | 4.648 | 5.309 | 5.766 | 5.986 | 6.040 | 6.040 | 6.062 | 6.124 | 6.213 | 6.322 | 6.457 | 6.611 | 6.758 | 6.861 |
| 36 | 2.470 | 2.820 | 3.355 | 3.980 | 4.565 | 4.991 | 5.210 | 5.267 | 5.264 | 5.280 | 5.336 | 5.418 | 5.518 | 5.644 | 5.789 | 5.921 | 6.008 |
| 37 | 2.131 | 2.427 | 2.879 | 3.414 | 3.931 | 4.326 | 4.540 | 4.599 | 4.593 | 4.605 | 4.656 | 4.731 | 4.823 | 4.941 | 5.076 | 5.196 | 5.270 |
| 38 | 1.843 | 2.094 | 2.477 | 2.935 | 3.390 | 3.755 | 3.962 | 4.020 | 4.013 | 4.022 | 4.068 | 4.137 | 4.222 | 4.332 | 4.458 | 4.567 | 4.629 |
| 39 | 1.597 | 1.812 | 2.137 | 2.528 | 2.929 | 3.264 | 3.462 | 3.519 | 3.510 | 3.516 | 3.559 | 3.623 | 3.701 | 3.803 | 3.922 | 4.020 | 4.073 |
| 40 | 1.388 | 1.571 | 1.847 | 2.183 | 2.536 | 2.842 | 3.029 | 3.083 | 3.074 | 3.078 | 3.117 | 3.177 | 3.249 | 3.344 | 3.454 | 3.543 | 3.588 |
| 41 | 1.208 | 1.365 | 1.601 | 1.889 | 2.199 | 2.478 | 2.653 | 2.705 | 2.695 | 2.697 | 2.734 | 2.789 | 2.856 | 2.944 | 3.046 | 3.127 | 3.165 |
| 42 | 1.054 | 1.189 | 1.390 | 1.638 | 1.911 | 2.164 | 2.327 | 2.375 | 2.365 | 2.367 | 2.401 | 2.451 | 2.513 | 2.595 | 2.690 | 2.764 | 2.796 |
| 43 | 0.921 | 1.037 | 1.210 | 1.423 | 1.664 | 1.893 | 2.043 | 2.088 | 2.078 | 2.078 | 2.110 | 2.157 | 2.214 | 2.290 | 2.378 | 2.445 | 2.473 |
| 44 | 0.806 | 0.906 | 1.054 | 1.239 | 1.451 | 1.657 | 1.796 | 1.837 | 1.827 | 1.827 | 1.856 | 1.900 | 1.952 | 2.022 | 2.104 | 2.165 | 2.189 |
| 45 | 0.706 | 0.793 | 0.921 | 1.081 | 1.267 | 1.453 | 1.579 | 1.617 | 1.607 | 1.607 | 1.635 | 1.675 | 1.723 | 1.788 | 1.863 | 1.919 | 1.940 |
| 46 | 0.619 | 0.695 | 0.806 | 0.944 | 1.109 | 1.275 | 1.390 | 1.425 | 1.415 | 1.415 | 1.440 | 1.478 | 1.522 | 1.581 | 1.650 | 1.702 | 1.721 |
| 47 | 0.544 | 0.610 | 0.706 | 0.826 | 0.971 | 1.120 | 1.225 | 1.256 | 1.246 | 1.246 | 1.270 | 1.304 | 1.344 | 1.399 | 1.463 | 1.510 | 1.527 |
| 48 | 0.478 | 0.536 | 0.619 | 0.723 | 0.851 | 0.985 | 1.079 | 1.107 | 1.098 | 1.098 | 1.120 | 1.151 | 1.188 | 1.238 | 1.297 | 1.341 | 1.356 |
| 49 | 0.421 | 0.471 | 0.543 | 0.634 | 0.747 | 0.866 | 0.951 | 0.976 | 0.968 | 0.968 | 0.988 | 1.017 | 1.050 | 1.096 | 1.150 | 1.191 | 1.205 |
| 50 | 0.370 | 0.414 | 0.477 | 0.556 | 0.655 | 0.762 | 0.839 | 0.861 | 0.853 | 0.853 | 0.872 | 0.898 | 0.928 | 0.970 | 1.020 | 1.057 | 1.071 |
| 51 | 3.261 | 3.647 | 4.193 | 4.882 | 5.754 | 6.704 | 7.390 | 7.590 | 7.518 | 7.518 | 7.686 | 7.927 | 8.205 | 8.587 | 9.045 | 9.390 | 9.514 - 1 |
| 52 | 2.874 | 3.212 | 3.687 | 4.286 | 5.052 | 5.896 | 6.511 | 6.690 | 6.623 | 6.623 | 6.777 | 6.996 | 7.248 | 7.597 | 8.017 | 8.336 | 8.453 |
| 53 | 2.532 | 2.830 | 3.243 | 3.763 | 4.434 | 5.183 | 5.734 | 5.893 | 5.831 | 5.831 | 5.971 | 6.170 | 6.398 | 6.716 | 7.102 | 7.398 | 7.509 |
| 54 | 2.232 | 2.455 | 2.853 | 3.303 | 3.890 | 4.553 | 5.045 | 5.188 | 5.131 | 5.130 | 5.257 | 5.437 | 5.644 | 5.933 | 6.287 | 6.562 | 6.667 |
| 55 | 1.966 | 2.196 | 2.509 | 2.899 | 3.411 | 3.997 | 4.436 | 4.563 | 4.510 | 4.510 | 4.624 | 4.787 | 4.973 | 5.237 | 5.561 | 5.816 | 5.916 |
| 56 | 1.732 | 1.935 | 2.207 | 2.543 | 2.988 | 3.505 | 3.895 | 4.008 | 3.961 | 3.960 | 4.063 | 4.209 | 4.378 | 4.617 | 4.914 | 5.150 | 5.245 |
| 57 | 1.525 | 1.704 | 1.940 | 2.229 | 2.616 | 3.070 | 3.416 | 3.517 | 3.474 | 3.473 | 3.565 | 3.696 | 3.848 | 4.065 | 4.338 | 4.556 | 4.646 |
| 58 | 1.342 | 1.499 | 1.704 | 1.953 | 2.287 | 2.685 | 2.992 | 3.081 | 3.042 | 3.041 | 3.124 | 3.241 | 3.378 | 3.575 | 3.824 | 4.026 | 4.111 |
| 59 | 1.180 | 1.319 | 1.497 | 1.710 | 1.998 | 2.346 | 2.616 | 2.695 | 2.660 | 2.659 | 2.732 | 2.837 | 2.960 | 3.139 | 3.366 | 3.553 | 3.633 |
| 60 | 1.036 | 1.159 | 1.313 | 1.496 | 1.744 | 2.046 | 2.283 | 2.353 | 2.321 | 2.320 | 2.386 | 2.479 | 2.589 | 2.751 | 2.959 | 3.131 | 3.206 |
| 61 | 0.909 | 1.017 | 1.151 | 1.307 | 1.520 | 1.782 | 1.989 | 2.050 | 2.022 | 2.021 | 2.080 | 2.163 | 2.261 | 2.407 | 2.596 | 2.754 | 2.825 |
| 62 | 0.797 | 0.892 | 1.008 | 1.141 | 1.323 | 1.550 | 1.730 | 1.782 | 1.758 | 1.757 | 1.809 | 1.883 | 1.970 | 2.102 | 2.274 | 2.419 | 2.485 |
| 63 | 0.697 | 0.781 | 0.882 | 0.996 | 1.151 | 1.346 | 1.501 | 1.546 | 1.525 | 1.525 | 1.570 | 1.635 | 1.713 | 1.832 | 1.988 | 2.121 | 2.182 |
| 64 | 0.610 | 0.684 | 0.771 | 0.868 | 1.000 | 1.167 | 1.300 | 1.338 | 1.319 | 1.320 | 1.360 | 1.417 | 1.487 | 1.593 | 1.734 | 1.855 | 1.911 |
| 65 | 0.532 | 0.597 | 0.673 | 0.755 | 0.868 | 1.010 | 1.123 | 1.155 | 1.139 | 1.140 | 1.176 | 1.226 | 1.287 | 1.382 | 1.509 | 1.619 | 1.671 |
| 66 | 0.464 | 0.521 | 0.587 | 0.657 | 0.752 | 0.872 | 0.968 | 0.995 | 0.981 | 0.982 | 1.014 | 1.058 | 1.111 | 1.196 | 1.311 | 1.410 | 1.458 |
| 67 | 0.403 | 0.453 | 0.511 | 0.571 | 0.651 | 0.753 | 0.833 | 0.854 | 0.842 | 0.845 | 0.873 | 0.910 | 0.957 | 1.033 | 1.135 | 1.225 | 1.268 |
| 68 | 0.351 | 0.394 | 0.444 | 0.495 | 0.563 | 0.648 | 0.714 | 0.731 | 0.722 | 0.724 | 0.749 | 0.782 | 0.822 | 0.889 | 0.980 | 1.061 | 1.100 |
| 69 | 3.042 | 3.423 | 3.855 | 4.294 | 4.864 | 5.571 | 6.115 | 6.248 | 6.165 | 6.200 | 6.416 | 6.694 | 7.047 | 7.633 | 8.442 | 9.162 | 9.518 - 2 |
| 70 | 2.636 | 2.968 | 3.342 | 3.716 | 4.195 | 4.779 | 5.222 | 5.323 | 5.255 | 5.293 | 5.483 | 5.720 | 6.021 | 6.533 | 7.248 | 7.888 | 8.207 |
| 71 | 2.281 | 2.569 | 2.892 | 3.211 | 3.611 | 4.092 | 4.448 | 4.523 | 4.468 | 4.509 | 4.675 | 4.874 | 5.130 | 5.574 | 6.202 | 6.768 | 7.053 |
| 72 | 1.972 | 2.221 | 2.499 | 2.770 | 3.103 | 3.496 | 3.781 | 3.834 | 3.790 | 3.833 | 3.977 | 4.144 | 4.358 | 4.740 | 5.289 | 5.786 | 6.039 |
| 73 | 1.703 | 1.918 | 2.157 | 2.385 | 2.661 | 2.981 | 3.206 | 3.243 | 3.208 | 3.251 | 3.376 | 3.514 | 3.691 | 4.017 | 4.493 | 4.928 | 5.149 |
| 74 | 1.470 | 1.654 | 1.858 | 2.050 | 2.276 | 2.535 | 2.712 | 2.737 | 2.710 | 2.752 | 2.860 | 2.972 | 3.117 | 3.393 | 3.802 | 4.179 | 4.372 |
| 75 | 1.268 | 1.425 | 1.598 | 1.758 | 1.943 | 2.152 | 2.290 | 2.306 | 2.285 | 2.326 | 2.418 | 2.508 | 2.624 | 2.854 | 3.203 | 3.528 | 3.694 |
| 76 | 1.093 | 1.227 | 1.373 | 1.504 | 1.655 | 1.822 | 1.930 | 1.940 | 1.925 | 1.963 | 2.041 | 2.112 | 2.202 | 2.392 | 2.687 | 2.964 | 3.106 |
| 77 | 0.942 | 1.056 | 1.178 | 1.285 | 1.406 | 1.540 | 1.625 | 1.630 | 1.619 | 1.655 | 1.720 | 1.774 | 1.842 | 1.997 | 2.244 | 2.477 | 2.598 |
| 78 | 0.811 | 0.908 | 1.010 | 1.097 | 1.193 | 1.300 | 1.366 | 1.369 | 1.362 | 1.394 | 1.448 | 1.487 | 1.537 | 1.661 | 1.864 | 2.059 | 2.160 |
| 79 | 0.699 | 0.780 | 0.865 | 0.935 | 1.012 | 1.097 | 1.149 | 1.150 | 1.146 | 1.174 | 1.218 | 1.245 | 1.279 | 1.376 | 1.541 | 1.701 | 1.784 |
| 80 | 0.601 | 0.670 | 0.740 | 0.797 | 0.858 | 0.926 | 0.966 | 0.967 | 0.965 | 0.989 | 1.024 | 1.041 | 1.062 | 1.135 | 1.267 | 1.396 | 1.464 |

(1 MBAR = 100 NEWTON/M SQ)

JULY                                      ZONAL MEAN PRESSURE (MB)


| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.616 | 6.086 | 6.528 | 7.033 | 7.422 | 7.629 | 7.832 | 7.896 | 7.886 | 7.852 | 7.855 | 7.904 | 7.947 | 7.938 | 7.901 | 7.894 | 7.928 | + 1 |
| 19 | 4.619 | 4.997 | 5.506 | 5.994 | 6.347 | 6.551 | 6.656 | 6.697 | 6.690 | 6.660 | 6.674 | 6.728 | 6.787 | 6.805 | 6.795 | 6.804 | 6.841 | |
| 20 | 3.775 | 4.138 | 4.633 | 5.105 | 5.429 | 5.593 | 5.662 | 5.688 | 5.685 | 5.670 | 5.683 | 5.739 | 5.804 | 5.838 | 5.844 | 5.863 | 5.903 | |
| 21 | 3.079 | 3.420 | 3.892 | 4.345 | 4.646 | 4.780 | 4.823 | 4.839 | 4.840 | 4.834 | 4.849 | 4.904 | 4.971 | 5.012 | 5.028 | 5.053 | 5.095 | |
| 22 | 2.514 | 2.826 | 3.267 | 3.696 | 3.978 | 4.091 | 4.116 | 4.124 | 4.128 | 4.128 | 4.145 | 4.197 | 4.262 | 4.306 | 4.328 | 4.356 | 4.398 | |
| 23 | 2.059 | 2.338 | 2.742 | 3.144 | 3.407 | 3.506 | 3.518 | 3.521 | 3.528 | 3.532 | 3.550 | 3.597 | 3.659 | 3.703 | 3.727 | 3.757 | 3.799 | |
| 24 | 1.694 | 1.939 | 2.302 | 2.673 | 2.919 | 3.008 | 3.013 | 3.012 | 3.020 | 3.027 | 3.044 | 3.088 | 3.145 | 3.187 | 3.212 | 3.243 | 3.283 | |
| 25 | 1.402 | 1.613 | 1.935 | 2.272 | 2.502 | 2.583 | 2.584 | 2.581 | 2.589 | 2.598 | 2.615 | 2.653 | 2.706 | 2.746 | 2.771 | 2.801 | 2.839 | |
| 26 | 1.166 | 1.347 | 1.628 | 1.932 | 2.144 | 2.220 | 2.220 | 2.216 | 2.224 | 2.233 | 2.248 | 2.283 | 2.330 | 2.368 | 2.392 | 2.421 | 2.457 | |
| 27 | 0.976 | 1.129 | 1.373 | 1.644 | 1.838 | 1.910 | 1.910 | 1.905 | 1.912 | 1.922 | 1.936 | 1.966 | 2.009 | 2.044 | 2.068 | 2.095 | 2.128 | |
| 28 | 0.921 | 0.951 | 1.160 | 1.399 | 1.576 | 1.644 | 1.646 | 1.641 | 1.647 | 1.656 | 1.668 | 1.696 | 1.734 | 1.766 | 1.789 | 1.815 | 1.845 | |
| 29 | 0.695 | 0.804 | 0.983 | 1.192 | 1.351 | 1.416 | 1.419 | 1.415 | 1.420 | 1.428 | 1.439 | 1.464 | 1.498 | 1.528 | 1.550 | 1.574 | 1.601 | |
| 30 | 0.591 | 0.682 | 0.834 | 1.016 | 1.159 | 1.220 | 1.226 | 1.222 | 1.226 | 1.233 | 1.243 | 1.265 | 1.296 | 1.324 | 1.345 | 1.367 | 1.391 | |
| 31 | 0.504 | 0.581 | 0.710 | 0.868 | 0.994 | 1.052 | 1.059 | 1.057 | 1.060 | 1.066 | 1.075 | 1.094 | 1.122 | 1.148 | 1.168 | 1.188 | 1.210 | |
| 32 | 0.432 | 0.496 | 0.607 | 0.742 | 0.854 | 0.908 | 0.917 | 0.915 | 0.918 | 0.923 | 0.931 | 0.948 | 0.973 | 0.997 | 1.016 | 1.035 | 1.053 | |
| 33 | 3.712 | 4.258 | 5.193 | 6.353 | 7.337 | 7.836 | 7.942 | 7.937 | 7.955 | 7.994 | 8.066 | 8.221 | 8.448 | 8.672 | 8.853 | 9.022 | 9.181 | + 0 |
| 34 | 3.200 | 3.663 | 4.458 | 5.450 | 6.312 | 6.771 | 6.888 | 6.891 | 6.903 | 6.934 | 6.999 | 7.139 | 7.344 | 7.552 | 7.725 | 7.879 | 8.014 | |
| 35 | 2.765 | 3.161 | 3.837 | 4.686 | 5.436 | 5.857 | 5.981 | 5.990 | 5.998 | 6.022 | 6.081 | 6.207 | 6.393 | 6.586 | 6.750 | 6.890 | 7.005 | |
| 36 | 2.395 | 2.734 | 3.311 | 4.036 | 4.688 | 5.072 | 5.199 | 5.215 | 5.218 | 5.237 | 5.290 | 5.403 | 5.572 | 5.752 | 5.907 | 6.034 | 6.131 | |
| 37 | 2.078 | 2.371 | 2.864 | 3.484 | 4.050 | 4.398 | 4.526 | 4.545 | 4.545 | 4.559 | 4.607 | 4.710 | 4.863 | 5.030 | 5.177 | 5.292 | 5.374 | |
| 38 | 1.806 | 2.060 | 2.483 | 3.014 | 3.505 | 3.819 | 3.945 | 3.967 | 3.965 | 3.975 | 4.018 | 4.112 | 4.251 | 4.406 | 4.543 | 4.649 | 4.717 | |
| 39 | 1.573 | 1.794 | 2.158 | 2.612 | 3.038 | 3.321 | 3.443 | 3.467 | 3.463 | 3.470 | 3.509 | 3.594 | 3.720 | 3.864 | 3.993 | 4.088 | 4.146 | |
| 40 | 1.371 | 1.564 | 1.879 | 2.269 | 2.639 | 2.893 | 3.009 | 3.034 | 3.028 | 3.033 | 3.069 | 3.145 | 3.260 | 3.393 | 3.513 | 3.601 | 3.650 | |
| 41 | 1.198 | 1.367 | 1.639 | 1.975 | 2.296 | 2.524 | 2.633 | 2.658 | 2.652 | 2.654 | 2.687 | 2.756 | 2.861 | 2.983 | 3.095 | 3.175 | 3.217 | |
| 42 | 1.047 | 1.196 | 1.432 | 1.722 | 2.001 | 2.206 | 2.308 | 2.331 | 2.325 | 2.326 | 2.355 | 2.418 | 2.513 | 2.625 | 2.730 | 2.803 | 2.839 | |
| 43 | 0.917 | 1.047 | 1.253 | 1.504 | 1.748 | 1.930 | 2.025 | 2.047 | 2.040 | 2.040 | 2.067 | 2.124 | 2.210 | 2.313 | 2.410 | 2.477 | 2.508 | |
| 44 | 0.804 | 0.919 | 1.098 | 1.315 | 1.529 | 1.692 | 1.779 | 1.800 | 1.792 | 1.792 | 1.816 | 1.867 | 1.945 | 2.040 | 2.130 | 2.191 | 2.218 | |
| 45 | 0.706 | 0.807 | 0.963 | 1.152 | 1.339 | 1.485 | 1.564 | 1.584 | 1.575 | 1.575 | 1.596 | 1.643 | 1.714 | 1.800 | 1.883 | 1.940 | 1.964 | |
| 46 | 0.620 | 0.709 | 0.846 | 1.010 | 1.174 | 1.304 | 1.377 | 1.395 | 1.387 | 1.385 | 1.405 | 1.447 | 1.511 | 1.590 | 1.666 | 1.719 | 1.740 | |
| 47 | 0.546 | 0.624 | 0.743 | 0.887 | 1.031 | 1.147 | 1.213 | 1.229 | 1.221 | 1.220 | 1.237 | 1.275 | 1.333 | 1.405 | 1.475 | 1.523 | 1.543 | |
| 48 | 0.481 | 0.549 | 0.654 | 0.779 | 0.905 | 1.009 | 1.069 | 1.083 | 1.076 | 1.074 | 1.090 | 1.124 | 1.176 | 1.242 | 1.307 | 1.351 | 1.369 | |
| 49 | 0.424 | 0.484 | 0.575 | 0.684 | 0.796 | 0.888 | 0.942 | 0.955 | 0.948 | 0.946 | 0.960 | 0.991 | 1.038 | 1.098 | 1.157 | 1.198 | 1.215 | |
| 50 | 0.374 | 0.427 | 0.506 | 0.601 | 0.699 | 0.782 | 0.831 | 0.843 | 0.836 | 0.834 | 0.846 | 0.874 | 0.916 | 0.970 | 1.025 | 1.063 | 1.079 | |
| 51 | 3.306 | 3.766 | 4.456 | 5.286 | 6.146 | 6.884 | 7.324 | 7.430 | 7.368 | 7.347 | 7.459 | 7.708 | 8.086 | 8.577 | 9.079 | 9.434 | 9.584 | - 1 |
| 52 | 2.921 | 3.322 | 3.923 | 4.644 | 5.400 | 6.057 | 6.454 | 6.550 | 6.492 | 6.471 | 6.572 | 6.794 | 7.133 | 7.578 | 8.039 | 8.369 | 8.511 | |
| 53 | 2.581 | 2.932 | 3.453 | 4.079 | 4.741 | 5.326 | 5.684 | 5.771 | 5.718 | 5.698 | 5.787 | 5.985 | 6.288 | 6.691 | 7.114 | 7.422 | 7.556 | |
| 54 | 2.282 | 2.587 | 3.039 | 3.581 | 4.160 | 4.679 | 5.002 | 5.081 | 5.033 | 5.014 | 5.093 | 5.268 | 5.539 | 5.904 | 6.293 | 6.579 | 6.706 | |
| 55 | 2.017 | 2.283 | 2.674 | 3.142 | 3.646 | 4.106 | 4.397 | 4.470 | 4.426 | 4.408 | 4.478 | 4.633 | 4.875 | 5.205 | 5.562 | 5.829 | 5.949 | |
| 56 | 1.782 | 2.014 | 2.351 | 2.754 | 3.192 | 3.598 | 3.860 | 3.928 | 3.889 | 3.872 | 3.932 | 4.069 | 4.285 | 4.583 | 4.911 | 5.160 | 5.274 | |
| 57 | 1.573 | 1.775 | 2.066 | 2.411 | 2.790 | 3.149 | 3.384 | 3.447 | 3.413 | 3.397 | 3.449 | 3.570 | 3.761 | 4.031 | 4.332 | 4.564 | 4.671 | |
| 58 | 1.388 | 1.564 | 1.814 | 2.109 | 2.436 | 2.751 | 2.962 | 3.020 | 2.991 | 2.976 | 3.022 | 3.127 | 3.297 | 3.540 | 3.817 | 4.032 | 4.134 | |
| 59 | 1.223 | 1.376 | 1.591 | 1.843 | 2.124 | 2.399 | 2.588 | 2.642 | 2.617 | 2.603 | 2.643 | 2.734 | 2.884 | 3.105 | 3.358 | 3.558 | 3.654 | |
| 60 | 1.077 | 1.210 | 1.395 | 1.609 | 1.849 | 2.089 | 2.257 | 2.308 | 2.286 | 2.274 | 2.307 | 2.386 | 2.519 | 2.718 | 2.950 | 3.136 | 3.225 | |
| 61 | 0.946 | 1.063 | 1.221 | 1.402 | 1.607 | 1.816 | 1.965 | 2.012 | 1.994 | 1.983 | 2.011 | 2.079 | 2.196 | 2.375 | 2.587 | 2.759 | 2.843 | |
| 62 | 0.830 | 0.932 | 1.068 | 1.221 | 1.395 | 1.576 | 1.707 | 1.750 | 1.736 | 1.726 | 1.749 | 1.807 | 1.910 | 2.071 | 2.265 | 2.423 | 2.502 | |
| 63 | 0.728 | 0.816 | 0.932 | 1.062 | 1.209 | 1.365 | 1.480 | 1.519 | 1.508 | 1.499 | 1.518 | 1.567 | 1.658 | 1.802 | 1.979 | 2.125 | 2.198 | |
| 64 | 0.636 | 0.713 | 0.813 | 0.922 | 1.047 | 1.180 | 1.281 | 1.316 | 1.307 | 1.299 | 1.315 | 1.357 | 1.435 | 1.565 | 1.725 | 1.859 | 1.927 | |
| 65 | 0.556 | 0.622 | 0.708 | 0.800 | 0.905 | 1.019 | 1.106 | 1.138 | 1.131 | 1.124 | 1.137 | 1.171 | 1.240 | 1.355 | 1.500 | 1.623 | 1.686 | |
| 66 | 0.484 | 0.542 | 0.615 | 0.693 | 0.782 | 0.878 | 0.953 | 0.981 | 0.976 | 0.970 | 0.980 | 1.009 | 1.069 | 1.171 | 1.302 | 1.413 | 1.472 | |
| 67 | 0.421 | 0.471 | 0.534 | 0.600 | 0.675 | 0.756 | 0.820 | 0.844 | 0.841 | 0.836 | 0.844 | 0.867 | 0.919 | 1.009 | 1.126 | 1.228 | 1.281 | |
| 68 | 0.366 | 0.409 | 0.463 | 0.519 | 0.581 | 0.649 | 0.703 | 0.725 | 0.722 | 0.718 | 0.724 | 0.744 | 0.788 | 0.867 | 0.972 | 1.063 | 1.112 | |
| 69 | 3.168 | 3.542 | 4.004 | 4.477 | 5.002 | 5.573 | 6.024 | 6.204 | 6.189 | 6.160 | 6.206 | 6.365 | 6.738 | 7.432 | 8.356 | 9.177 | 9.625 | - 2 |
| 70 | 2.741 | 3.063 | 3.459 | 3.860 | 4.299 | 4.774 | 5.149 | 5.300 | 5.291 | 5.270 | 5.306 | 5.433 | 5.749 | 6.350 | 7.163 | 7.895 | 8.302 | |
| 71 | 2.368 | 2.645 | 2.983 | 3.322 | 3.690 | 4.083 | 4.392 | 4.517 | 4.513 | 4.498 | 4.526 | 4.628 | 4.892 | 5.409 | 6.119 | 6.767 | 7.134 | |
| 72 | 2.043 | 2.280 | 2.569 | 2.856 | 3.162 | 3.486 | 3.738 | 3.841 | 3.839 | 3.830 | 3.853 | 3.934 | 4.153 | 4.593 | 5.207 | 5.777 | 6.106 | |
| 73 | 1.760 | 1.963 | 2.210 | 2.451 | 2.705 | 2.971 | 3.176 | 3.258 | 3.259 | 3.254 | 3.274 | 3.337 | 3.516 | 3.887 | 4.414 | 4.911 | 5.203 | |
| 74 | 1.514 | 1.689 | 1.898 | 2.100 | 2.310 | 2.527 | 2.693 | 2.758 | 2.759 | 2.759 | 2.776 | 2.825 | 2.969 | 3.278 | 3.725 | 4.155 | 4.413 | |
| 75 | 1.301 | 1.451 | 1.628 | 1.797 | 1.969 | 2.146 | 2.278 | 2.329 | 2.331 | 2.334 | 2.350 | 2.388 | 2.501 | 2.755 | 3.130 | 3.498 | 3.725 | |
| 76 | 1.117 | 1.245 | 1.396 | 1.535 | 1.675 | 1.818 | 1.924 | 1.964 | 1.966 | 1.971 | 1.986 | 2.014 | 2.102 | 2.306 | 2.618 | 2.930 | 3.126 | |
| 77 | 0.958 | 1.068 | 1.195 | 1.309 | 1.422 | 1.538 | 1.622 | 1.653 | 1.655 | 1.662 | 1.676 | 1.697 | 1.762 | 1.924 | 2.179 | 2.440 | 2.609 | |
| 78 | 0.821 | 0.916 | 1.022 | 1.116 | 1.206 | 1.298 | 1.366 | 1.390 | 1.391 | 1.399 | 1.413 | 1.427 | 1.474 | 1.599 | 1.804 | 2.021 | 2.165 | |
| 79 | 0.703 | 0.784 | 0.874 | 0.950 | 1.022 | 1.096 | 1.149 | 1.167 | 1.169 | 1.178 | 1.190 | 1.198 | 1.230 | 1.324 | 1.486 | 1.663 | 1.785 | |
| 80 | 0.602 | 0.671 | 0.747 | 0.809 | 0.866 | 0.924 | 0.967 | 0.981 | 0.983 | 0.991 | 1.002 | 1.005 | 1.024 | 1.092 | 1.218 | 1.361 | 1.463 | |

(1 MBAR = 100 NEWTON/M SQ)

32

AUGUST                                    ZONAL MEAN PRESSURE (MB)


| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.804 | 6.173 | 6.641 | 7.084 | 7.444 | 7.717 | 7.892 | 7.951 | 7.922 | 7.877 | 7.877 | 7.914 | 7.932 | 7.899 | 7.836 | 7.787 | 7.769 | + 1 |
| 19 | 4.722 | 5.110 | 5.602 | 6.046 | 6.370 | 6.584 | 6.705 | 6.740 | 6.714 | 6.683 | 6.695 | 6.742 | 6.777 | 6.770 | 6.733 | 6.702 | 6.694 | |
| 20 | 3.812 | 4.210 | 4.715 | 5.159 | 5.454 | 5.619 | 5.700 | 5.719 | 5.698 | 5.680 | 5.699 | 5.752 | 5.796 | 5.804 | 5.784 | 5.768 | 5.767 | |
| 21 | 3.075 | 3.465 | 3.966 | 4.402 | 4.673 | 4.802 | 4.853 | 4.861 | 4.846 | 4.836 | 4.861 | 4.914 | 4.963 | 4.979 | 4.971 | 4.964 | 4.968 | |
| 22 | 2.488 | 2.856 | 3.337 | 3.756 | 4.006 | 4.109 | 4.138 | 4.139 | 4.128 | 4.126 | 4.153 | 4.205 | 4.253 | 4.274 | 4.273 | 4.273 | 4.281 | |
| 23 | 2.026 | 2.362 | 2.810 | 3.206 | 3.437 | 3.521 | 3.536 | 3.532 | 3.525 | 3.527 | 3.553 | 3.602 | 3.649 | 3.672 | 3.676 | 3.679 | 3.689 | |
| 24 | 1.663 | 1.963 | 2.371 | 2.737 | 2.951 | 3.021 | 3.026 | 3.019 | 3.015 | 3.020 | 3.045 | 3.090 | 3.134 | 3.158 | 3.164 | 3.170 | 3.181 | |
| 25 | 1.377 | 1.640 | 2.004 | 2.339 | 2.534 | 2.595 | 2.595 | 2.586 | 2.584 | 2.590 | 2.613 | 2.653 | 2.694 | 2.718 | 2.726 | 2.733 | 2.744 | |
| 26 | 1.149 | 1.377 | 1.699 | 1.999 | 2.178 | 2.232 | 2.229 | 2.219 | 2.218 | 2.225 | 2.246 | 2.281 | 2.318 | 2.342 | 2.351 | 2.358 | 2.368 | |
| 27 | 0.967 | 1.163 | 1.443 | 1.711 | 1.872 | 1.921 | 1.917 | 1.908 | 1.907 | 1.914 | 1.932 | 1.963 | 1.997 | 2.019 | 2.029 | 2.036 | 2.045 | |
| 28 | 0.820 | 0.987 | 1.230 | 1.465 | 1.610 | 1.655 | 1.651 | 1.642 | 1.642 | 1.648 | 1.664 | 1.691 | 1.722 | 1.743 | 1.753 | 1.760 | 1.768 | |
| 29 | 0.699 | 0.842 | 1.051 | 1.256 | 1.385 | 1.427 | 1.424 | 1.416 | 1.416 | 1.421 | 1.435 | 1.459 | 1.486 | 1.506 | 1.516 | 1.523 | 1.529 | |
| 30 | 0.600 | 0.722 | 0.901 | 1.078 | 1.192 | 1.231 | 1.230 | 1.223 | 1.222 | 1.227 | 1.239 | 1.260 | 1.284 | 1.303 | 1.313 | 1.319 | 1.325 | |
| 31 | 0.517 | 0.621 | 0.774 | 0.927 | 1.027 | 1.063 | 1.063 | 1.057 | 1.056 | 1.061 | 1.071 | 1.089 | 1.111 | 1.128 | 1.138 | 1.144 | 1.148 | |
| 32 | 4.470 | 5.361 | 6.669 | 7.980 | 8.850 | 9.179 | 9.199 | 9.155 | 9.144 | 9.176 | 9.266 | 9.424 | 9.617 | 9.781 | 9.880 | 9.934 | 9.967 | + 0 |
| 33 | 3.877 | 4.643 | 5.761 | 6.881 | 7.634 | 7.936 | 7.970 | 7.937 | 7.924 | 7.949 | 8.027 | 8.166 | 8.338 | 8.491 | 8.588 | 8.638 | 8.662 | |
| 34 | 3.370 | 4.031 | 4.988 | 5.943 | 6.592 | 6.867 | 6.914 | 6.891 | 6.877 | 6.895 | 6.963 | 7.085 | 7.238 | 7.380 | 7.476 | 7.522 | 7.537 | |
| 35 | 2.935 | 3.508 | 4.329 | 5.142 | 5.698 | 5.949 | 6.006 | 5.992 | 5.976 | 5.988 | 6.047 | 6.155 | 6.292 | 6.424 | 6.516 | 6.559 | 6.567 | |
| 36 | 2.560 | 3.059 | 3.765 | 4.456 | 4.932 | 5.159 | 5.223 | 5.217 | 5.200 | 5.208 | 5.259 | 5.354 | 5.477 | 5.599 | 5.687 | 5.727 | 5.730 | |
| 37 | 2.236 | 2.672 | 3.281 | 3.868 | 4.275 | 4.480 | 4.549 | 4.549 | 4.532 | 4.536 | 4.580 | 4.664 | 4.774 | 4.886 | 4.971 | 5.008 | 5.006 | |
| 38 | 1.954 | 2.337 | 2.864 | 3.364 | 3.710 | 3.895 | 3.967 | 3.973 | 3.956 | 3.956 | 3.994 | 4.069 | 4.167 | 4.271 | 4.351 | 4.385 | 4.380 | |
| 39 | 1.710 | 2.047 | 2.504 | 2.930 | 3.225 | 3.392 | 3.465 | 3.475 | 3.458 | 3.455 | 3.488 | 3.554 | 3.642 | 3.737 | 3.813 | 3.844 | 3.837 | |
| 40 | 1.498 | 1.795 | 2.192 | 2.556 | 2.808 | 2.957 | 3.030 | 3.044 | 3.027 | 3.022 | 3.050 | 3.109 | 3.187 | 3.275 | 3.346 | 3.375 | 3.366 | |
| 41 | 1.313 | 1.576 | 1.922 | 2.233 | 2.449 | 2.583 | 2.654 | 2.670 | 2.654 | 2.647 | 2.671 | 2.722 | 2.793 | 2.873 | 2.940 | 2.966 | 2.956 | |
| 42 | 1.152 | 1.384 | 1.687 | 1.953 | 2.138 | 2.259 | 2.328 | 2.345 | 2.330 | 2.322 | 2.342 | 2.387 | 2.451 | 2.524 | 2.586 | 2.610 | 2.599 | |
| 43 | 1.013 | 1.218 | 1.481 | 1.711 | 1.870 | 1.978 | 2.045 | 2.063 | 2.049 | 2.039 | 2.056 | 2.095 | 2.152 | 2.220 | 2.277 | 2.299 | 2.288 | |
| 44 | 0.891 | 1.072 | 1.302 | 1.499 | 1.637 | 1.735 | 1.798 | 1.816 | 1.803 | 1.793 | 1.806 | 1.841 | 1.892 | 1.954 | 2.006 | 2.027 | 2.016 | |
| 45 | 0.785 | 0.944 | 1.145 | 1.315 | 1.435 | 1.523 | 1.583 | 1.601 | 1.588 | 1.578 | 1.589 | 1.619 | 1.665 | 1.721 | 1.769 | 1.788 | 1.778 | |
| 46 | 0.692 | 0.832 | 1.007 | 1.155 | 1.259 | 1.338 | 1.394 | 1.412 | 1.401 | 1.390 | 1.398 | 1.425 | 1.466 | 1.517 | 1.561 | 1.579 | 1.569 | |
| 47 | 0.611 | 0.734 | 0.887 | 1.014 | 1.105 | 1.177 | 1.229 | 1.246 | 1.236 | 1.225 | 1.231 | 1.255 | 1.291 | 1.338 | 1.379 | 1.394 | 1.386 | |
| 48 | 0.540 | 0.647 | 0.780 | 0.890 | 0.970 | 1.036 | 1.084 | 1.101 | 1.091 | 1.080 | 1.085 | 1.105 | 1.138 | 1.180 | 1.217 | 1.232 | 1.225 | |
| 49 | 0.477 | 0.571 | 0.687 | 0.782 | 0.852 | 0.911 | 0.957 | 0.972 | 0.963 | 0.953 | 0.956 | 0.974 | 1.003 | 1.041 | 1.075 | 1.089 | 1.083 | |
| 50 | 4.222 | 5.045 | 6.043 | 6.864 | 7.479 | 8.020 | 8.439 | 8.586 | 8.503 | 8.403 | 8.427 | 8.578 | 8.838 | 9.182 | 9.498 | 9.628 | 9.573 | - 1 |
| 51 | 3.738 | 4.453 | 5.315 | 6.024 | 6.564 | 7.055 | 7.443 | 7.581 | 7.505 | 7.411 | 7.426 | 7.556 | 7.786 | 8.097 | 8.387 | 8.512 | 8.466 | |
| 52 | 3.310 | 3.931 | 4.673 | 5.283 | 5.759 | 6.204 | 6.561 | 6.691 | 6.622 | 6.533 | 6.541 | 6.653 | 6.857 | 7.137 | 7.404 | 7.523 | 7.487 | |
| 53 | 2.931 | 3.468 | 4.106 | 4.630 | 5.047 | 5.451 | 5.780 | 5.900 | 5.838 | 5.756 | 5.759 | 5.855 | 6.034 | 6.287 | 6.533 | 6.648 | 6.621 | |
| 54 | 2.595 | 3.059 | 3.606 | 4.053 | 4.420 | 4.784 | 5.086 | 5.198 | 5.143 | 5.067 | 5.067 | 5.148 | 5.306 | 5.534 | 5.761 | 5.872 | 5.853 | |
| 55 | 2.295 | 2.696 | 3.163 | 3.545 | 3.865 | 4.195 | 4.471 | 4.575 | 4.525 | 4.457 | 4.454 | 4.523 | 4.661 | 4.866 | 5.076 | 5.183 | 5.172 | |
| 56 | 2.028 | 2.374 | 2.773 | 3.097 | 3.376 | 3.672 | 3.924 | 4.021 | 3.977 | 3.916 | 3.912 | 3.970 | 4.090 | 4.274 | 4.468 | 4.572 | 4.568 | |
| 57 | 1.790 | 2.088 | 2.428 | 2.703 | 2.945 | 3.210 | 3.439 | 3.528 | 3.491 | 3.436 | 3.431 | 3.480 | 3.584 | 3.750 | 3.929 | 4.030 | 4.033 | |
| 58 | 1.578 | 1.834 | 2.123 | 2.355 | 2.565 | 2.802 | 3.010 | 3.092 | 3.060 | 3.011 | 3.006 | 3.047 | 3.137 | 3.285 | 3.450 | 3.549 | 3.557 | |
| 59 | 1.389 | 1.609 | 1.854 | 2.050 | 2.231 | 2.442 | 2.629 | 2.704 | 2.677 | 2.636 | 2.631 | 2.664 | 2.741 | 2.873 | 3.026 | 3.122 | 3.135 | |
| 60 | 1.220 | 1.410 | 1.618 | 1.782 | 1.937 | 2.124 | 2.292 | 2.361 | 2.339 | 2.303 | 2.299 | 2.325 | 2.391 | 2.509 | 2.650 | 2.743 | 2.760 | |
| 61 | 1.070 | 1.233 | 1.409 | 1.547 | 1.680 | 1.845 | 1.995 | 2.058 | 2.040 | 2.010 | 2.006 | 2.027 | 2.082 | 2.187 | 2.318 | 2.407 | 2.427 | |
| 62 | 0.937 | 1.077 | 1.226 | 1.341 | 1.455 | 1.600 | 1.733 | 1.790 | 1.776 | 1.751 | 1.747 | 1.764 | 1.810 | 1.904 | 2.023 | 2.109 | 2.131 | |
| 63 | 0.818 | 0.938 | 1.065 | 1.161 | 1.259 | 1.385 | 1.503 | 1.554 | 1.544 | 1.523 | 1.520 | 1.532 | 1.571 | 1.654 | 1.763 | 1.845 | 1.869 | |
| 64 | 0.713 | 0.817 | 0.924 | 1.004 | 1.087 | 1.197 | 1.301 | 1.347 | 1.339 | 1.323 | 1.320 | 1.329 | 1.360 | 1.434 | 1.534 | 1.611 | 1.636 | |
| 65 | 0.621 | 0.709 | 0.800 | 0.868 | 0.938 | 1.034 | 1.124 | 1.165 | 1.160 | 1.147 | 1.144 | 1.150 | 1.176 | 1.240 | 1.332 | 1.404 | 1.430 | |
| 66 | 0.539 | 0.615 | 0.692 | 0.749 | 0.809 | 0.891 | 0.970 | 1.006 | 1.003 | 0.993 | 0.990 | 0.994 | 1.015 | 1.071 | 1.153 | 1.221 | 1.247 | |
| 67 | 0.468 | 0.533 | 0.598 | 0.646 | 0.697 | 0.767 | 0.835 | 0.867 | 0.865 | 0.858 | 0.856 | 0.857 | 0.874 | 0.923 | 0.997 | 1.059 | 1.085 | |
| 68 | 4.051 | 4.605 | 5.159 | 5.563 | 5.997 | 6.600 | 7.181 | 7.454 | 7.450 | 7.396 | 7.379 | 7.381 | 7.511 | 7.934 | 8.595 | 9.167 | 9.416 | - 2 |
| 69 | 3.503 | 3.975 | 4.446 | 4.787 | 5.156 | 5.670 | 6.163 | 6.398 | 6.402 | 6.365 | 6.351 | 6.343 | 6.442 | 6.805 | 7.391 | 7.911 | 8.149 | |
| 70 | 3.025 | 3.427 | 3.827 | 4.116 | 4.430 | 4.865 | 5.282 | 5.480 | 5.489 | 5.467 | 5.456 | 5.440 | 5.514 | 5.823 | 6.338 | 6.807 | 7.031 | |
| 71 | 2.608 | 2.952 | 3.291 | 3.536 | 3.801 | 4.169 | 4.518 | 4.685 | 4.696 | 4.684 | 4.677 | 4.657 | 4.710 | 4.971 | 5.419 | 5.838 | 6.045 | |
| 72 | 2.246 | 2.539 | 2.828 | 3.035 | 3.259 | 3.567 | 3.859 | 3.996 | 4.008 | 4.004 | 4.001 | 3.978 | 4.014 | 4.232 | 4.619 | 4.989 | 5.179 | |
| 73 | 1.931 | 2.183 | 2.428 | 2.603 | 2.790 | 3.048 | 3.289 | 3.401 | 3.412 | 3.414 | 3.415 | 3.392 | 3.414 | 3.593 | 3.923 | 4.248 | 4.420 | |
| 74 | 1.659 | 1.874 | 2.084 | 2.230 | 2.386 | 2.600 | 2.799 | 2.889 | 2.897 | 2.903 | 2.908 | 2.886 | 2.897 | 3.042 | 3.321 | 3.602 | 3.756 | |
| 75 | 1.423 | 1.608 | 1.787 | 1.909 | 2.037 | 2.214 | 2.377 | 2.448 | 2.454 | 2.463 | 2.470 | 2.450 | 2.453 | 2.567 | 2.800 | 3.042 | 3.178 | |
| 76 | 1.218 | 1.379 | 1.532 | 1.632 | 1.736 | 1.882 | 2.015 | 2.070 | 2.074 | 2.084 | 2.094 | 2.077 | 2.072 | 2.161 | 2.353 | 2.557 | 2.677 | |
| 77 | 1.042 | 1.182 | 1.312 | 1.394 | 1.478 | 1.597 | 1.705 | 1.747 | 1.748 | 1.759 | 1.772 | 1.757 | 1.747 | 1.813 | 1.969 | 2.141 | 2.245 | |
| 78 | 0.891 | 1.013 | 1.124 | 1.190 | 1.256 | 1.353 | 1.441 | 1.472 | 1.472 | 1.483 | 1.497 | 1.484 | 1.469 | 1.517 | 1.641 | 1.784 | 1.874 | |
| 79 | 0.761 | 0.867 | 0.962 | 1.015 | 1.066 | 1.145 | 1.216 | 1.240 | 1.238 | 1.249 | 1.263 | 1.252 | 1.234 | 1.265 | 1.363 | 1.481 | 1.558 | |
| 80 | 0.651 | 0.742 | 0.822 | 0.865 | 0.905 | 0.968 | 1.026 | 1.044 | 1.041 | 1.052 | 1.066 | 1.055 | 1.035 | 1.053 | 1.128 | 1.225 | 1.291 | |

(1 MBAR = 100 NEWTON/M SQ)

ZONAL MEAN PRESSURE (MB)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.737 | 6.007 | 6.472 | 7.038 | 7.523 | 7.798 | 7.892 | 7.906 | 7.896 | 7.875 | 7.862 | 7.859 | 7.821 | 7.706 | 7.546 | 7.422 | 7.374 | + 1 |
| 19 | 4.711 | 5.027 | 5.508 | 6.033 | 6.440 | 6.647 | 6.704 | 6.703 | 6.689 | 6.676 | 6.678 | 6.693 | 6.681 | 6.600 | 6.476 | 6.376 | 6.334 |
| 20 | 3.858 | 4.199 | 4.685 | 5.172 | 5.515 | 5.669 | 5.700 | 5.691 | 5.676 | 5.669 | 5.680 | 5.707 | 5.709 | 5.653 | 5.557 | 5.475 | 5.439 |
| 21 | 3.163 | 3.510 | 3.985 | 4.435 | 4.726 | 4.840 | 4.853 | 4.839 | 4.827 | 4.823 | 4.840 | 4.871 | 4.883 | 4.843 | 4.768 | 4.701 | 4.668 |
| 22 | 2.606 | 2.940 | 3.391 | 3.803 | 4.052 | 4.137 | 4.139 | 4.124 | 4.113 | 4.113 | 4.131 | 4.163 | 4.179 | 4.152 | 4.092 | 4.036 | 4.007 |
| 23 | 2.160 | 2.471 | 2.889 | 3.262 | 3.477 | 3.542 | 3.536 | 3.521 | 3.512 | 3.514 | 3.532 | 3.563 | 3.580 | 3.561 | 3.513 | 3.465 | 3.439 |
| 24 | 1.804 | 2.086 | 2.464 | 2.799 | 2.985 | 3.036 | 3.026 | 3.012 | 3.006 | 3.008 | 3.025 | 3.053 | 3.070 | 3.056 | 3.017 | 2.976 | 2.952 |
| 25 | 1.517 | 1.768 | 2.105 | 2.402 | 2.565 | 2.605 | 2.594 | 2.581 | 2.577 | 2.581 | 2.596 | 2.619 | 2.635 | 2.625 | 2.592 | 2.557 | 2.535 |
| 26 | 1.286 | 1.506 | 1.802 | 2.063 | 2.205 | 2.239 | 2.228 | 2.216 | 2.213 | 2.217 | 2.230 | 2.250 | 2.264 | 2.256 | 2.229 | 2.197 | 2.177 |
| 27 | 1.098 | 1.288 | 1.545 | 1.772 | 1.896 | 1.925 | 1.916 | 1.907 | 1.904 | 1.908 | 1.919 | 1.935 | 1.947 | 1.941 | 1.917 | 1.889 | 1.870 |
| 28 | 0.942 | 1.106 | 1.327 | 1.523 | 1.631 | 1.658 | 1.651 | 1.643 | 1.641 | 1.644 | 1.653 | 1.666 | 1.676 | 1.671 | 1.651 | 1.625 | 1.607 |
| 29 | 0.814 | 0.953 | 1.142 | 1.310 | 1.404 | 1.429 | 1.424 | 1.417 | 1.416 | 1.419 | 1.426 | 1.436 | 1.444 | 1.440 | 1.422 | 1.399 | 1.381 |
| 30 | 0.706 | 0.825 | 0.985 | 1.128 | 4.210 | 1.233 | 1.230 | 1.225 | 1.224 | 1.226 | 1.232 | 1.240 | 1.246 | 1.242 | 1.226 | 1.205 | 1.188 |
| 31 | 0.615 | 0.716 | 0.852 | 0.973 | 1.043 | 1.065 | 1.064 | 1.060 | 1.059 | 1.061 | 1.065 | 1.071 | 1.076 | 1.072 | 1.058 | 1.039 | 1.022 |
| 32 | 5.368 | 6.227 | 7.375 | 8.396 | 8.996 | 9.202 | 9.216 | 9.191 | 9.179 | 9.188 | 9.221 | 9.269 | 9.300 | 9.265 | 9.143 | 8.963 | 8.800 | + 0 |
| 33 | 4.701 | 5.431 | 6.399 | 7.256 | 7.769 | 7.963 | 7.994 | 7.978 | 7.965 | 7.969 | 7.994 | 8.030 | 8.051 | 8.018 | 7.908 | 7.740 | 7.583 |
| 34 | 4.124 | 4.747 | 5.562 | 6.279 | 6.716 | 6.899 | 6.943 | 6.937 | 6.922 | 6.922 | 6.940 | 6.966 | 6.979 | 6.948 | 6.849 | 6.692 | 6.541 |
| 35 | 3.624 | 4.155 | 4.843 | 5.442 | 5.814 | 5.984 | 6.039 | 6.040 | 6.025 | 6.020 | 6.033 | 6.051 | 6.058 | 6.028 | 5.938 | 5.792 | 5.647 |
| 36 | 3.188 | 3.643 | 4.223 | 4.723 | 5.039 | 5.198 | 5.261 | 5.267 | 5.252 | 5.243 | 5.252 | 5.264 | 5.266 | 5.238 | 5.156 | 5.019 | 4.881 |
| 37 | 2.807 | 3.198 | 3.689 | 4.105 | 4.373 | 4.521 | 4.589 | 4.601 | 4.585 | 4.574 | 4.578 | 4.586 | 4.584 | 4.558 | 4.483 | 4.355 | 4.224 |
| 38 | 2.473 | 2.811 | 3.226 | 3.574 | 3.801 | 3.938 | 4.009 | 4.025 | 4.009 | 3.996 | 3.997 | 4.001 | 3.997 | 3.972 | 3.903 | 3.784 | 3.660 |
| 39 | 2.181 | 2.472 | 2.825 | 3.116 | 3.309 | 3.435 | 3.508 | 3.526 | 3.510 | 3.496 | 3.495 | 3.496 | 3.490 | 3.466 | 3.403 | 3.292 | 3.175 |
| 40 | 1.924 | 2.176 | 2.427 | 2.721 | 2.885 | 3.001 | 3.073 | 3.094 | 3.079 | 3.063 | 3.060 | 3.059 | 3.051 | 3.029 | 2.971 | 2.868 | 2.759 |
| 41 | 1.698 | 1.917 | 2.174 | 2.378 | 2.519 | 2.625 | 2.696 | 2.718 | 2.704 | 2.688 | 2.682 | 2.680 | 2.672 | 2.651 | 2.598 | 2.502 | 2.400 |
| 42 | 1.500 | 1.690 | 1.909 | 2.082 | 2.203 | 2.300 | 2.369 | 2.391 | 2.378 | 2.362 | 2.355 | 2.351 | 2.342 | 2.323 | 2.274 | 2.185 | 2.091 |
| 43 | 1.325 | 1.490 | 1.678 | 1.824 | 1.929 | 2.017 | 2.083 | 2.106 | 2.095 | 2.078 | 2.070 | 2.064 | 2.056 | 2.038 | 1.993 | 1.911 | 1.824 |
| 44 | 1.172 | 1.315 | 1.475 | 1.600 | 1.691 | 1.772 | 1.834 | 1.857 | 1.847 | 1.830 | 1.821 | 1.815 | 1.807 | 1.790 | 1.749 | 1.673 | 1.593 |
| 45 | 1.037 | 1.160 | 1.298 | 1.404 | 1.484 | 1.557 | 1.616 | 1.639 | 1.629 | 1.613 | 1.604 | 1.597 | 1.589 | 1.574 | 1.536 | 1.467 | 1.393 |
| 46 | 0.918 | 1.024 | 1.142 | 1.233 | 1.303 | 1.370 | 1.425 | 1.447 | 1.439 | 1.423 | 1.413 | 1.406 | 1.399 | 1.385 | 1.350 | 1.287 | 1.220 |
| 47 | 0.812 | 0.904 | 1.005 | 1.083 | 1.145 | 1.206 | 1.257 | 1.278 | 1.271 | 1.256 | 1.246 | 1.239 | 1.232 | 1.219 | 1.187 | 1.129 | 1.069 |
| 48 | 0.720 | 0.798 | 0.884 | 0.951 | 1.006 | 1.062 | 1.110 | 1.130 | 1.123 | 1.109 | 1.099 | 1.092 | 1.085 | 1.074 | 1.044 | 0.992 | 0.938 |
| 49 | 6.375 | 7.042 | 7.775 | 8.355 | 8.847 | 9.359 | 9.795 | 9.981 | 9.927 | 9.296 | 9.695 | 9.625 | 9.563 | 9.455 | 9.188 | 8.719 | 8.233 | - 1 |
| 50 | 5.649 | 6.215 | 6.837 | 7.338 | 7.777 | 8.244 | 8.644 | 8.818 | 8.771 | 8.650 | 8.552 | 8.484 | 8.426 | 8.327 | 8.085 | 7.665 | 7.231 |
| 51 | 5.005 | 5.483 | 6.010 | 6.441 | 6.835 | 7.260 | 7.626 | 7.788 | 7.747 | 7.634 | 7.541 | 7.477 | 7.422 | 7.332 | 7.114 | 6.738 | 6.354 |
| 52 | 4.432 | 4.834 | 5.279 | 5.651 | 6.003 | 6.390 | 6.724 | 6.873 | 6.837 | 6.734 | 6.647 | 6.586 | 6.535 | 6.452 | 6.256 | 5.924 | 5.585 |
| 53 | 3.924 | 4.260 | 4.634 | 4.954 | 5.269 | 5.620 | 5.924 | 6.060 | 6.029 | 5.935 | 5.855 | 5.797 | 5.750 | 5.674 | 5.499 | 5.206 | 4.909 |
| 54 | 3.471 | 3.751 | 4.064 | 4.340 | 4.621 | 4.939 | 5.214 | 5.338 | 5.311 | 5.226 | 5.153 | 5.099 | 5.054 | 4.985 | 4.831 | 4.574 | 4.314 |
| 55 | 3.068 | 3.301 | 3.561 | 3.798 | 4.048 | 4.335 | 4.584 | 4.696 | 4.672 | 4.597 | 4.530 | 4.481 | 4.439 | 4.375 | 4.239 | 4.016 | 3.790 |
| 56 | 2.708 | 2.901 | 3.118 | 3.320 | 3.542 | 3.801 | 4.025 | 4.125 | 4.104 | 4.038 | 3.979 | 3.933 | 3.893 | 3.835 | 3.716 | 3.523 | 3.329 |
| 57 | 2.387 | 2.547 | 2.727 | 2.899 | 3.096 | 3.328 | 3.529 | 3.618 | 3.600 | 3.542 | 3.490 | 3.448 | 3.410 | 3.357 | 3.254 | 3.088 | 2.922 |
| 58 | 2.102 | 2.233 | 2.382 | 2.528 | 2.702 | 2.910 | 3.089 | 3.169 | 3.153 | 3.103 | 3.057 | 3.019 | 2.983 | 2.934 | 2.845 | 2.704 | 2.563 |
| 59 | 1.847 | 1.956 | 2.078 | 2.202 | 2.355 | 2.540 | 2.700 | 2.770 | 2.757 | 2.714 | 2.675 | 2.640 | 2.605 | 2.561 | 2.485 | 2.366 | 2.245 |
| 60 | 1.621 | 1.710 | 1.811 | 1.916 | 2.050 | 2.214 | 2.356 | 2.417 | 2.406 | 2.370 | 2.337 | 2.305 | 2.271 | 2.231 | 2.166 | 2.067 | 1.966 |
| 61 | 1.419 | 1.493 | 1.577 | 1.665 | 1.782 | 1.928 | 2.052 | 2.106 | 2.096 | 2.066 | 2.038 | 2.009 | 1.976 | 1.940 | 1.886 | 1.803 | 1.719 |
| 62 | 1.241 | 1.302 | 1.371 | 1.446 | 1.548 | 1.675 | 1.784 | 1.831 | 1.823 | 1.799 | 1.776 | 1.749 | 1.717 | 1.684 | 1.639 | 1.571 | 1.501 |
| 63 | 1.082 | 1.134 | 1.191 | 1.254 | 1.342 | 1.454 | 1.549 | 1.589 | 1.583 | 1.563 | 1.544 | 1.519 | 1.489 | 1.460 | 1.422 | 1.367 | 1.309 |
| 64 | 0.943 | 0.985 | 1.033 | 1.086 | 1.163 | 1.260 | 1.342 | 1.377 | 1.372 | 1.357 | 1.341 | 1.318 | 1.290 | 1.263 | 1.232 | 1.187 | 1.139 |
| 65 | 0.819 | 0.855 | 0.895 | 0.940 | 1.006 | 1.090 | 1.161 | 1.190 | 1.187 | 1.176 | 1.163 | 1.142 | 1.115 | 1.090 | 1.066 | 1.030 | 0.990 |
| 66 | 0.711 | 0.741 | 0.774 | 0.813 | 0.870 | 0.943 | 1.005 | 1.027 | 1.025 | 1.017 | 1.007 | 0.987 | 0.962 | 0.940 | 0.920 | 0.892 | 0.859 |
| 67 | 6.160 | 6.416 | 6.695 | 7.020 | 7.510 | 8.136 | 8.647 | 8.849 | 8.834 | 8.784 | 8.707 | 8.525 | 8.282 | 8.088 | 7.930 | 7.706 | 7.445 | - 2 |
| 68 | 5.328 | 5.546 | 5.782 | 6.059 | 6.479 | 7.013 | 7.443 | 7.608 | 7.601 | 7.573 | 7.514 | 7.342 | 7.120 | 6.948 | 6.823 | 6.649 | 6.436 |
| 69 | 4.601 | 4.788 | 4.988 | 5.225 | 5.584 | 6.038 | 6.396 | 6.529 | 6.527 | 6.517 | 6.474 | 6.321 | 6.111 | 5.958 | 5.861 | 5.726 | 5.552 |
| 70 | 3.968 | 4.128 | 4.299 | 4.501 | 4.808 | 5.191 | 5.487 | 5.592 | 5.594 | 5.598 | 5.567 | 5.429 | 5.236 | 5.101 | 5.026 | 4.922 | 4.780 |
| 71 | 3.417 | 3.555 | 3.702 | 3.874 | 4.134 | 4.456 | 4.698 | 4.780 | 4.783 | 4.797 | 4.778 | 4.654 | 4.478 | 4.359 | 4.302 | 4.222 | 4.105 |
| 72 | 2.938 | 3.059 | 3.185 | 3.330 | 3.550 | 3.819 | 4.016 | 4.077 | 4.081 | 4.102 | 4.092 | 3.982 | 3.823 | 3.719 | 3.676 | 3.615 | 3.518 |
| 73 | 2.523 | 2.629 | 2.738 | 2.860 | 3.045 | 3.268 | 3.426 | 3.471 | 3.474 | 3.500 | 3.497 | 3.400 | 3.258 | 3.168 | 3.135 | 3.088 | 3.007 |
| 74 | 2.163 | 2.257 | 2.351 | 2.453 | 2.607 | 2.791 | 2.918 | 2.948 | 2.950 | 2.978 | 2.981 | 2.898 | 2.772 | 2.694 | 2.669 | 2.633 | 2.564 |
| 75 | 1.852 | 1.936 | 2.017 | 2.101 | 2.227 | 2.380 | 2.480 | 2.499 | 2.500 | 2.528 | 2.536 | 2.465 | 2.355 | 2.287 | 2.268 | 2.239 | 2.191 |
| 76 | 1.583 | 1.659 | 1.729 | 1.797 | 1.900 | 2.024 | 2.104 | 2.114 | 2.113 | 2.140 | 2.152 | 2.092 | 1.996 | 1.938 | 1.924 | 1.901 | 1.851 |
| 77 | 1.352 | 1.420 | 1.480 | 1.535 | 1.617 | 1.719 | 1.782 | 1.786 | 1.783 | 1.808 | 1.822 | 1.773 | 1.690 | 1.640 | 1.629 | 1.611 | 1.568 |
| 78 | 1.153 | 1.214 | 1.266 | 1.309 | 1.374 | 1.457 | 1.507 | 1.506 | 1.502 | 1.525 | 1.540 | 1.500 | 1.429 | 1.386 | 1.377 | 1.362 | 1.325 |
| 79 | 0.982 | 1.037 | 1.081 | 1.114 | 1.166 | 1.233 | 1.273 | 1.270 | 1.265 | 1.286 | 1.301 | 1.267 | 1.207 | 1.170 | 1.163 | 1.150 | 1.118 |
| 80 | 9.836 | 0.885 | 0.922 | 0.948 | 0.988 | 1.043 | 1.075 | 1.071 | 1.066 | 1.085 | 1.099 | 1.071 | 1.019 | 0.987 | 0.981 | 0.970 | 0.943 |

(1 MBAR = 100 NEWTON/M SQ)

34

ZONAL MEAN PRESSURE (MB)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.207 | 6.488 | 6.892 | 7.313 | 7.634 | 7.797 | 7.837 | 7.830 | 7.831 | 7.843 | 7.839 | 7.783 | 7.653 | 7.457 | 7.235 | 7.041 | 6.915 + 1 |
| 19 | 5.209 | 5.505 | 5.900 | 6.274 | 6.529 | 6.641 | 6.655 | 6.638 | 6.634 | 6.647 | 6.655 | 6.624 | 6.532 | 6.380 | 6.199 | 6.033 | 5.919 |
| 20 | 4.364 | 4.666 | 5.049 | 5.384 | 5.588 | 5.662 | 5.659 | 5.637 | 5.630 | 5.642 | 5.656 | 5.642 | 5.576 | 5.458 | 5.310 | 5.165 | 5.061 |
| 21 | 3.660 | 3.956 | 4.320 | 4.620 | 4.785 | 4.833 | 4.820 | 4.796 | 4.787 | 4.798 | 4.815 | 4.810 | 4.763 | 4.670 | 4.546 | 4.420 | 4.325 |
| 22 | 3.076 | 3.358 | 3.698 | 3.965 | 4.100 | 4.131 | 4.114 | 4.089 | 4.079 | 4.089 | 4.106 | 4.107 | 4.072 | 3.996 | 3.892 | 3.781 | 3.693 |
| 23 | 2.595 | 2.857 | 3.168 | 3.403 | 3.515 | 3.535 | 3.517 | 3.494 | 3.483 | 3.492 | 3.508 | 3.511 | 3.483 | 3.421 | 3.332 | 3.233 | 3.152 |
| 24 | 2.198 | 2.436 | 2.715 | 2.922 | 3.015 | 3.030 | 3.013 | 2.991 | 2.981 | 2.988 | 3.004 | 3.006 | 2.982 | 2.929 | 2.852 | 2.763 | 2.689 |
| 25 | 1.870 | 2.083 | 2.330 | 2.509 | 2.588 | 2.600 | 2.585 | 2.565 | 2.556 | 2.563 | 2.576 | 2.578 | 2.555 | 2.509 | 2.441 | 2.362 | 2.293 |
| 26 | 1.599 | 1.786 | 2.002 | 2.156 | 2.223 | 2.233 | 2.221 | 2.205 | 2.196 | 2.202 | 2.213 | 2.213 | 2.191 | 2.150 | 2.090 | 2.018 | 1.954 |
| 27 | 1.373 | 1.536 | 1.722 | 1.853 | 1.910 | 1.921 | 1.912 | 1.898 | 1.890 | 1.895 | 1.905 | 1.902 | 1.881 | 1.843 | 1.789 | 1.723 | 1.664 |
| 28 | 1.184 | 1.325 | 1.484 | 1.594 | 1.643 | 1.654 | 1.648 | 1.636 | 1.630 | 1.634 | 1.642 | 1.637 | 1.616 | 1.581 | 1.532 | 1.472 | 1.416 |
| 29 | 1.026 | 1.146 | 1.280 | 1.373 | 1.414 | 1.426 | 1.423 | 1.413 | 1.407 | 1.411 | 1.417 | 1.411 | 1.389 | 1.357 | 1.313 | 1.257 | 1.205 |
| 30 | 0.892 | 0.994 | 1.106 | 1.183 | 1.219 | 1.230 | 1.230 | 1.223 | 1.218 | 1.221 | 1.225 | 1.217 | 1.196 | 1.165 | 1.125 | 1.074 | 1.026 |
| 31 | 0.778 | 0.864 | 0.958 | 1.021 | 1.051 | 1.063 | 1.065 | 1.059 | 1.055 | 1.058 | 1.060 | 1.051 | 1.030 | 1.002 | 0.965 | 0.917 | 0.873 |
| 32 | 6.805 | 7.529 | 8.305 | 8.824 | 9.078 | 9.197 | 9.230 | 9.190 | 9.154 | 9.174 | 9.186 | 9.090 | 8.885 | 8.620 | 8.280 | 7.842 | 7.431 + 0 |
| 33 | 5.969 | 6.575 | 7.215 | 7.636 | 7.850 | 7.968 | 8.012 | 7.987 | 7.956 | 7.970 | 7.970 | 7.870 | 7.673 | 7.426 | 7.113 | 6.709 | 6.328 |
| 34 | 5.248 | 5.754 | 6.278 | 6.618 | 6.799 | 6.912 | 6.966 | 6.951 | 6.926 | 6.934 | 6.925 | 6.822 | 6.635 | 6.406 | 6.117 | 5.744 | 5.393 |
| 35 | 4.623 | 5.044 | 5.473 | 5.746 | 5.898 | 6.006 | 6.065 | 6.059 | 6.038 | 6.041 | 6.025 | 5.922 | 5.745 | 5.534 | 5.267 | 4.923 | 4.601 |
| 36 | 4.079 | 4.429 | 4.778 | 4.997 | 5.124 | 5.226 | 5.288 | 5.289 | 5.271 | 5.271 | 5.249 | 5.148 | 4.982 | 4.787 | 4.541 | 4.225 | 3.930 |
| 37 | 3.604 | 3.895 | 4.179 | 4.353 | 4.460 | 4.555 | 4.618 | 4.624 | 4.609 | 4.606 | 4.579 | 4.481 | 4.327 | 4.148 | 3.921 | 3.631 | 3.362 |
| 38 | 3.188 | 3.430 | 3.660 | 3.799 | 3.889 | 3.976 | 4.039 | 4.049 | 4.036 | 4.030 | 4.000 | 3.906 | 3.764 | 3.599 | 3.391 | 3.125 | 2.881 |
| 39 | 2.823 | 3.023 | 3.211 | 3.321 | 3.396 | 3.477 | 3.537 | 3.550 | 3.540 | 3.531 | 3.499 | 3.411 | 3.279 | 3.129 | 2.938 | 2.695 | 2.473 |
| 40 | 2.501 | 2.668 | 2.820 | 2.908 | 2.971 | 3.044 | 3.102 | 3.117 | 3.108 | 3.098 | 3.065 | 2.982 | 2.862 | 2.724 | 2.549 | 2.328 | 2.127 |
| 41 | 2.218 | 2.356 | 2.480 | 2.550 | 2.603 | 2.670 | 2.725 | 2.741 | 2.733 | 2.722 | 2.688 | 2.611 | 2.501 | 2.375 | 2.215 | 2.014 | 1.833 |
| 42 | 1.967 | 2.082 | 2.183 | 2.239 | 2.284 | 2.345 | 2.396 | 2.412 | 2.406 | 2.394 | 2.361 | 2.289 | 2.189 | 2.074 | 1.928 | 1.746 | 1.583 |
| 43 | 1.745 | 1.841 | 1.923 | 1.968 | 2.007 | 2.062 | 2.109 | 2.126 | 2.120 | 2.108 | 2.076 | 2.010 | 1.919 | 1.814 | 1.681 | 1.516 | 1.371 |
| 44 | 1.549 | 1.629 | 1.696 | 1.732 | 1.766 | 1.815 | 1.859 | 1.875 | 1.870 | 1.858 | 1.827 | 1.766 | 1.684 | 1.588 | 1.467 | 1.319 | 1.189 |
| 45 | 1.375 | 1.441 | 1.496 | 1.526 | 1.555 | 1.599 | 1.639 | 1.654 | 1.651 | 1.638 | 1.610 | 1.554 | 1.479 | 1.393 | 1.282 | 1.149 | 1.034 |
| 46 | 1.220 | 1.275 | 1.320 | 1.345 | 1.371 | 1.410 | 1.446 | 1.461 | 1.458 | 1.446 | 1.419 | 1.368 | 1.301 | 1.222 | 1.122 | 1.003 | 0.900 |
| 47 | 1.083 | 1.128 | 1.165 | 1.186 | 1.209 | 1.244 | 1.277 | 1.291 | 1.288 | 1.277 | 1.252 | 1.205 | 1.144 | 1.073 | 0.983 | 0.876 | 0.785 |
| 48 | 0.961 | 0.998 | 1.029 | 1.046 | 1.066 | 1.098 | 1.128 | 1.140 | 1.138 | 1.128 | 1.104 | 1.063 | 1.008 | 0.943 | 0.862 | 0.767 | 0.686 |
| 49 | 0.852 | 0.883 | 0.908 | 0.922 | 0.940 | 0.969 | 0.996 | 1.007 | 1.006 | 0.996 | 0.975 | 0.937 | 0.887 | 0.829 | 0.756 | 0.671 | 0.601 |
| 50 | 7.552 | 7.806 | 8.010 | 8.132 | 8.296 | 8.551 | 8.790 | 8.899 | 8.886 | 8.797 | 8.602 | 8.262 | 7.814 | 7.284 | 6.629 | 5.882 | 5.264 - 1 |
| 51 | 6.690 | 6.897 | 7.063 | 7.168 | 7.315 | 7.543 | 7.757 | 7.856 | 7.847 | 7.766 | 7.589 | 7.284 | 6.881 | 6.402 | 5.816 | 5.157 | 4.617 |
| 52 | 5.922 | 6.090 | 6.225 | 6.315 | 6.447 | 6.651 | 6.842 | 6.931 | 6.924 | 6.852 | 6.692 | 6.419 | 6.056 | 5.625 | 5.102 | 4.523 | 4.053 |
| 53 | 5.237 | 5.373 | 5.482 | 5.559 | 5.677 | 5.859 | 6.029 | 6.110 | 6.105 | 6.040 | 5.898 | 5.653 | 5.327 | 4.939 | 4.474 | 3.967 | 3.559 |
| 54 | 4.627 | 4.736 | 4.824 | 4.889 | 4.995 | 5.157 | 5.308 | 5.381 | 5.377 | 5.320 | 5.193 | 4.975 | 4.682 | 4.334 | 3.922 | 3.479 | 3.126 |
| 55 | 4.083 | 4.171 | 4.240 | 4.296 | 4.390 | 4.535 | 4.668 | 4.732 | 4.729 | 4.680 | 4.568 | 4.374 | 4.111 | 3.799 | 3.435 | 3.050 | 2.746 |
| 56 | 3.600 | 3.669 | 3.724 | 3.770 | 3.855 | 3.983 | 4.101 | 4.157 | 4.154 | 4.111 | 4.013 | 3.841 | 3.605 | 3.326 | 3.006 | 2.673 | 2.411 |
| 57 | 3.169 | 3.223 | 3.266 | 3.305 | 3.380 | 3.494 | 3.597 | 3.646 | 3.643 | 3.607 | 3.521 | 3.368 | 3.158 | 2.909 | 2.628 | 2.341 | 2.117 |
| 58 | 2.786 | 2.829 | 2.861 | 2.894 | 2.960 | 3.060 | 3.151 | 3.192 | 3.190 | 3.159 | 3.085 | 2.950 | 2.761 | 2.540 | 2.295 | 2.048 | 1.857 |
| 59 | 2.446 | 2.479 | 2.504 | 2.530 | 2.588 | 2.677 | 2.756 | 2.791 | 2.788 | 2.762 | 2.699 | 2.579 | 2.411 | 2.215 | 2.002 | 1.791 | 1.628 |
| 60 | 2.145 | 2.170 | 2.188 | 2.210 | 2.260 | 2.338 | 2.406 | 2.435 | 2.432 | 2.411 | 2.357 | 2.252 | 2.102 | 1.929 | 1.744 | 1.564 | 1.426 |
| 61 | 1.877 | 1.892 | 1.910 | 1.927 | 1.971 | 2.040 | 2.098 | 2.121 | 2.118 | 2.101 | 2.056 | 1.963 | 1.830 | 1.677 | 1.518 | 1.365 | 1.248 |
| 62 | 1.641 | 1.656 | 1.665 | 1.678 | 1.717 | 1.777 | 1.827 | 1.844 | 1.841 | 1.827 | 1.790 | 1.708 | 1.590 | 1.456 | 1.319 | 1.189 | 1.091 |
| 63 | 1.432 | 1.444 | 1.450 | 1.460 | 1.493 | 1.546 | 1.587 | 1.601 | 1.596 | 1.586 | 1.555 | 1.484 | 1.379 | 1.262 | 1.145 | 1.035 | 0.952 |
| 64 | 1.248 | 1.257 | 1.261 | 1.268 | 1.297 | 1.343 | 1.377 | 1.386 | 1.382 | 1.374 | 1.349 | 1.288 | 1.194 | 1.092 | 0.992 | 0.900 | 0.831 |
| 65 | 1.085 | 1.093 | 1.095 | 1.101 | 1.125 | 1.165 | 1.193 | 1.199 | 1.193 | 1.188 | 1.169 | 1.115 | 1.033 | 0.943 | 0.859 | 0.782 | 0.724 |
| 66 | 0.943 | 0.949 | 0.950 | 0.954 | 0.975 | 1.009 | 1.032 | 1.034 | 1.029 | 1.026 | 1.011 | 0.964 | 0.891 | 0.814 | 0.743 | 0.679 | 0.630 |
| 67 | 8.176 | 8.233 | 8.231 | 8.255 | 8.436 | 8.725 | 8.911 | 8.907 | 8.851 | 8.837 | 8.722 | 8.319 | 7.681 | 7.014 | 6.416 | 5.882 | 5.471 - 2 |
| 68 | 7.079 | 7.130 | 7.123 | 7.136 | 7.289 | 7.534 | 7.680 | 7.656 | 7.599 | 7.599 | 7.515 | 7.168 | 6.610 | 6.036 | 5.535 | 5.093 | 4.748 |
| 69 | 6.120 | 6.165 | 6.155 | 6.160 | 6.289 | 6.496 | 6.608 | 6.567 | 6.511 | 6.521 | 6.464 | 6.166 | 5.679 | 5.187 | 4.770 | 4.405 | 4.116 |
| 70 | 5.282 | 5.324 | 5.312 | 5.310 | 5.418 | 5.591 | 5.674 | 5.622 | 5.567 | 5.586 | 5.549 | 5.295 | 4.872 | 4.453 | 4.107 | 3.805 | 3.563 |
| 71 | 4.551 | 4.590 | 4.578 | 4.571 | 4.659 | 4.804 | 4.863 | 4.803 | 4.751 | 4.775 | 4.755 | 4.540 | 4.174 | 3.817 | 3.532 | 3.284 | 3.081 |
| 72 | 3.914 | 3.951 | 3.939 | 3.928 | 3.999 | 4.118 | 4.159 | 4.096 | 4.047 | 4.074 | 4.067 | 3.885 | 3.570 | 3.269 | 3.035 | 2.831 | 2.661 |
| 73 | 3.361 | 3.395 | 3.383 | 3.369 | 3.426 | 3.523 | 3.549 | 3.485 | 3.440 | 3.470 | 3.471 | 3.319 | 3.049 | 2.796 | 2.605 | 2.438 | 2.295 |
| 74 | 2.879 | 2.912 | 2.901 | 2.885 | 2.929 | 3.007 | 3.022 | 2.960 | 2.920 | 2.950 | 2.957 | 2.830 | 2.601 | 2.389 | 2.233 | 2.097 | 1.977 |
| 75 | 2.462 | 2.492 | 2.483 | 2.465 | 2.498 | 2.560 | 2.567 | 2.510 | 2.474 | 2.503 | 2.514 | 2.408 | 2.215 | 2.039 | 1.913 | 1.802 | 1.701 |
| 76 | 2.100 | 2.129 | 2.120 | 2.102 | 2.125 | 2.174 | 2.176 | 2.124 | 2.093 | 2.121 | 2.134 | 2.046 | 1.884 | 1.739 | 1.637 | 1.546 | 1.461 |
| 77 | 1.787 | 1.814 | 1.807 | 1.788 | 1.804 | 1.841 | 1.841 | 1.796 | 1.770 | 1.795 | 1.808 | 1.735 | 1.600 | 1.481 | 1.399 | 1.326 | 1.255 |
| 78 | 1.517 | 1.542 | 1.536 | 1.517 | 1.527 | 1.557 | 1.555 | 1.517 | 1.496 | 1.518 | 1.530 | 1.470 | 1.358 | 1.261 | 1.196 | 1.136 | 1.077 |
| 79 | 1.283 | 1.307 | 1.303 | 1.285 | 1.291 | 1.314 | 1.313 | 1.282 | 1.265 | 1.284 | 1.295 | 1.244 | 1.152 | 1.073 | 1.021 | 0.973 | 0.924 |
| 80 | 1.083 | 1.105 | 1.102 | 1.086 | 1.090 | 1.109 | 1.109 | 1.084 | 1.071 | 1.087 | 1.095 | 1.053 | 0.977 | 0.912 | 0.872 | 0.834 | 0.794 |

(1 MBAR = 100 NEWTON/M SQ)

35

NOVEMBER                                        ZONAL MEAN PRESSURE (MB)


| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.755 | 7.018 | 7.336 | 7.623 | 7.831 | 7.937 | 7.939 | 7.887 | 7.855 | 7.864 | 7.851 | 7.742 | 7.539 | 7.303 | 7.074 | 6.863 | 6.698 | + 1 |
| 19 | 5.812 | 6.035 | 6.298 | 6.520 | 6.666 | 6.729 | 6.715 | 6.668 | 6.641 | 6.651 | 6.649 | 6.576 | 6.425 | 6.235 | 6.038 | 5.847 | 5.697 |
| 20 | 5.001 | 5.189 | 5.406 | 5.578 | 5.679 | 5.712 | 5.690 | 5.647 | 5.625 | 5.633 | 5.637 | 5.588 | 5.475 | 5.321 | 5.148 | 4.975 | 4.838 |
| 21 | 4.305 | 4.461 | 4.641 | 4.773 | 4.842 | 4.855 | 4.830 | 4.793 | 4.773 | 4.780 | 4.786 | 4.753 | 4.667 | 4.540 | 4.387 | 4.228 | 4.101 |
| 22 | 3.709 | 3.843 | 3.987 | 4.087 | 4.132 | 4.134 | 4.109 | 4.076 | 4.059 | 4.063 | 4.070 | 4.047 | 3.980 | 3.872 | 3.736 | 3.589 | 3.471 |
| 23 | 3.199 | 3.311 | 3.427 | 3.502 | 3.530 | 3.526 | 3.502 | 3.474 | 3.458 | 3.462 | 3.468 | 3.451 | 3.396 | 3.303 | 3.180 | 3.045 | 2.935 |
| 24 | 2.763 | 2.856 | 2.949 | 3.003 | 3.019 | 3.012 | 2.992 | 2.968 | 2.953 | 2.956 | 2.961 | 2.947 | 2.899 | 2.817 | 2.706 | 2.581 | 2.479 |
| 25 | 2.389 | 2.467 | 2.540 | 2.578 | 2.585 | 2.577 | 2.560 | 2.540 | 2.528 | 2.529 | 2.533 | 2.520 | 2.477 | 2.403 | 2.302 | 2.187 | 2.092 |
| 26 | 2.069 | 2.134 | 2.191 | 2.216 | 2.217 | 2.209 | 2.196 | 2.179 | 2.168 | 2.169 | 2.172 | 2.158 | 2.118 | 2.050 | 1.958 | 1.853 | 1.764 |
| 27 | 1.795 | 1.849 | 1.892 | 1.907 | 1.904 | 1.897 | 1.887 | 1.872 | 1.863 | 1.864 | 1.865 | 1.850 | 1.812 | 1.750 | 1.666 | 1.569 | 1.488 |
| 28 | 1.560 | 1.604 | 1.637 | 1.644 | 1.638 | 1.632 | 1.624 | 1.613 | 1.604 | 1.605 | 1.605 | 1.589 | 1.551 | 1.494 | 1.417 | 1.329 | 1.255 |
| 29 | 1.358 | 1.394 | 1.418 | 1.420 | 1.412 | 1.407 | 1.401 | 1.391 | 1.384 | 1.385 | 1.383 | 1.366 | 1.330 | 1.276 | 1.206 | 1.126 | 1.058 |
| 30 | 1.184 | 1.213 | 1.230 | 1.228 | 1.219 | 1.214 | 1.210 | 1.203 | 1.197 | 1.197 | 1.194 | 1.176 | 1.141 | 1.091 | 1.027 | 0.955 | 0.894 |
| 31 | 1.033 | 1.057 | 1.070 | 1.064 | 1.054 | 1.050 | 1.048 | 1.041 | 1.037 | 1.037 | 1.033 | 1.014 | 0.980 | 0.933 | 0.875 | 0.810 | 0.755 |
| 32 | 9.036 | 9.233 | 9.313 | 9.236 | 9.138 | 9.103 | 9.084 | 9.035 | 8.996 | 8.995 | 8.951 | 8.761 | 8.424 | 7.991 | 7.468 | 6.883 | 6.390 | + 0 |
| 33 | 7.913 | 8.074 | 8.123 | 8.034 | 7.935 | 7.903 | 7.890 | 7.851 | 7.820 | 7.818 | 7.767 | 7.576 | 7.253 | 6.851 | 6.378 | 5.855 | 5.416 |
| 34 | 6.940 | 7.071 | 7.097 | 7.001 | 6.905 | 6.874 | 6.865 | 6.834 | 6.810 | 6.806 | 6.750 | 6.562 | 6.254 | 5.882 | 5.455 | 4.988 | 4.600 |
| 35 | 6.095 | 6.202 | 6.211 | 6.113 | 6.020 | 5.990 | 5.983 | 5.959 | 5.939 | 5.934 | 5.876 | 5.692 | 5.401 | 5.058 | 4.672 | 4.258 | 3.915 |
| 36 | 5.361 | 5.448 | 5.445 | 5.348 | 5.258 | 5.229 | 5.223 | 5.203 | 5.188 | 5.182 | 5.122 | 4.945 | 4.672 | 4.356 | 4.009 | 3.641 | 3.339 |
| 37 | 4.721 | 4.791 | 4.780 | 4.687 | 4.602 | 4.573 | 4.567 | 4.550 | 4.538 | 4.532 | 4.472 | 4.303 | 4.048 | 3.758 | 3.446 | 3.121 | 2.856 |
| 38 | 4.162 | 4.220 | 4.203 | 4.114 | 4.035 | 4.006 | 4.000 | 3.985 | 3.975 | 3.969 | 3.910 | 3.750 | 3.513 | 3.248 | 2.968 | 2.681 | 2.449 |
| 39 | 3.674 | 3.721 | 3.701 | 3.618 | 3.543 | 3.516 | 3.508 | 3.495 | 3.487 | 3.480 | 3.423 | 3.273 | 3.054 | 2.813 | 2.562 | 2.308 | 2.105 |
| 40 | 3.246 | 3.285 | 3.263 | 3.186 | 3.117 | 3.089 | 3.081 | 3.069 | 3.062 | 3.055 | 3.001 | 2.861 | 2.660 | 2.440 | 2.215 | 1.992 | 1.815 |
| 41 | 2.871 | 2.903 | 2.880 | 2.809 | 2.745 | 2.719 | 2.709 | 2.698 | 2.692 | 2.685 | 2.634 | 2.505 | 2.320 | 2.121 | 1.920 | 1.723 | 1.568 |
| 42 | 2.542 | 2.567 | 2.545 | 2.480 | 2.421 | 2.396 | 2.385 | 2.374 | 2.369 | 2.362 | 2.314 | 2.196 | 2.027 | 1.846 | 1.667 | 1.494 | 1.359 |
| 43 | 2.252 | 2.273 | 2.251 | 2.191 | 2.138 | 2.113 | 2.102 | 2.091 | 2.086 | 2.079 | 2.035 | 1.927 | 1.773 | 1.610 | 1.450 | 1.298 | 1.181 |
| 44 | 1.997 | 2.013 | 1.992 | 1.938 | 1.890 | 1.866 | 1.854 | 1.843 | 1.838 | 1.832 | 1.792 | 1.693 | 1.553 | 1.406 | 1.264 | 1.130 | 1.028 |
| 45 | 1.771 | 1.785 | 1.765 | 1.716 | 1.671 | 1.649 | 1.636 | 1.626 | 1.621 | 1.616 | 1.579 | 1.489 | 1.362 | 1.230 | 1.104 | 0.986 | 0.897 |
| 46 | 1.572 | 1.583 | 1.563 | 1.519 | 1.479 | 1.457 | 1.445 | 1.435 | 1.430 | 1.425 | 1.392 | 1.310 | 1.196 | 1.077 | 0.965 | 0.862 | 0.784 |
| 47 | 1.396 | 1.404 | 1.386 | 1.346 | 1.309 | 1.289 | 1.277 | 1.267 | 1.262 | 1.258 | 1.227 | 1.154 | 1.051 | 0.944 | 0.845 | 0.755 | 0.687 |
| 48 | 1.239 | 1.245 | 1.228 | 1.192 | 1.159 | 1.140 | 1.128 | 1.118 | 1.114 | 1.110 | 1.083 | 1.016 | 0.924 | 0.828 | 0.740 | 0.661 | 0.603 |
| 49 | 1.101 | 1.105 | 1.089 | 1.056 | 1.026 | 1.008 | 0.997 | 0.987 | 0.983 | 0.980 | 0.955 | 0.895 | 0.812 | 0.727 | 0.649 | 0.580 | 0.529 |
| 50 | 9.774 | 9.801 | 9.647 | 9.349 | 9.081 | 8.918 | 8.805 | 8.713 | 8.676 | 8.645 | 8.427 | 7.889 | 7.141 | 6.382 | 5.695 | 5.094 | 4.650 | - 1 |
| 51 | 8.678 | 8.691 | 8.545 | 8.275 | 8.033 | 7.882 | 7.775 | 7.688 | 7.654 | 7.627 | 7.432 | 6.949 | 6.278 | 5.603 | 4.999 | 4.474 | 4.089 |
| 52 | 7.701 | 7.704 | 7.565 | 7.320 | 7.102 | 6.963 | 6.862 | 6.780 | 6.749 | 6.726 | 6.551 | 6.118 | 5.518 | 4.919 | 4.388 | 3.931 | 3.597 |
| 53 | 6.831 | 6.824 | 6.692 | 6.470 | 6.273 | 6.147 | 6.051 | 5.975 | 5.946 | 5.927 | 5.772 | 5.383 | 4.847 | 4.316 | 3.852 | 3.454 | 3.164 |
| 54 | 6.055 | 6.041 | 5.916 | 5.713 | 5.536 | 5.421 | 5.332 | 5.261 | 5.235 | 5.219 | 5.080 | 4.732 | 4.254 | 3.785 | 3.379 | 3.035 | 2.783 |
| 55 | 5.363 | 5.342 | 5.224 | 5.040 | 4.880 | 4.775 | 4.693 | 4.628 | 4.605 | 4.592 | 4.468 | 4.156 | 3.731 | 3.317 | 2.963 | 2.665 | 2.446 |
| 56 | 4.745 | 4.720 | 4.607 | 4.440 | 4.297 | 4.202 | 4.126 | 4.066 | 4.046 | 4.035 | 3.924 | 3.646 | 3.268 | 2.905 | 2.597 | 2.338 | 2.149 |
| 57 | 4.194 | 4.165 | 4.059 | 3.907 | 3.778 | 3.692 | 3.623 | 3.568 | 3.550 | 3.541 | 3.443 | 3.195 | 2.860 | 2.541 | 2.274 | 2.050 | 1.886 |
| 58 | 3.703 | 3.671 | 3.571 | 3.433 | 3.318 | 3.240 | 3.177 | 3.126 | 3.111 | 3.104 | 3.016 | 2.795 | 2.499 | 2.220 | 1.989 | 1.796 | 1.654 |
| 59 | 3.264 | 3.231 | 3.137 | 3.011 | 2.909 | 2.839 | 2.782 | 2.736 | 2.721 | 2.716 | 2.639 | 2.442 | 2.181 | 1.937 | 1.738 | 1.572 | 1.449 |
| 60 | 2.874 | 2.839 | 2.751 | 2.637 | 2.546 | 2.484 | 2.432 | 2.390 | 2.377 | 2.373 | 2.305 | 2.131 | 1.901 | 1.689 | 1.517 | 1.374 | 1.268 |
| 61 | 2.526 | 2.491 | 2.409 | 2.306 | 2.225 | 2.170 | 2.123 | 2.084 | 2.072 | 2.069 | 2.010 | 1.856 | 1.654 | 1.470 | 1.323 | 1.200 | 1.108 |
| 62 | 2.216 | 2.182 | 2.106 | 2.013 | 1.941 | 1.892 | 1.850 | 1.814 | 1.803 | 1.801 | 1.750 | 1.615 | 1.438 | 1.278 | 1.152 | 1.046 | 0.967 |
| 63 | 1.941 | 1.908 | 1.837 | 1.754 | 1.690 | 1.648 | 1.609 | 1.577 | 1.566 | 1.565 | 1.520 | 1.402 | 1.248 | 1.110 | 1.002 | 0.912 | 0.843 |
| 64 | 1.697 | 1.665 | 1.600 | 1.525 | 1.469 | 1.432 | 1.398 | 1.367 | 1.357 | 1.357 | 1.319 | 1.216 | 1.082 | 0.963 | 0.871 | 0.793 | 0.733 |
| 65 | 1.481 | 1.451 | 1.391 | 1.323 | 1.274 | 1.242 | 1.212 | 1.184 | 1.174 | 1.174 | 1.141 | 1.053 | 0.936 | 0.835 | 0.756 | 0.690 | 0.638 |
| 66 | 1.289 | 1.261 | 1.207 | 1.146 | 1.103 | 1.076 | 1.048 | 1.022 | 1.013 | 1.013 | 0.986 | 0.910 | 0.809 | 0.722 | 0.656 | 0.599 | 0.554 |
| 67 | 1.120 | 1.094 | 1.045 | 0.991 | 0.953 | 0.930 | 0.905 | 0.881 | 0.872 | 0.873 | 0.851 | 0.785 | 0.699 | 0.625 | 0.568 | 0.519 | 0.480 |
| 68 | 9.708 | 9.474 | 9.028 | 8.546 | 8.220 | 8.020 | 7.803 | 7.581 | 7.492 | 7.501 | 7.322 | 6.765 | 6.027 | 5.395 | 4.918 | 4.502 | 4.160 | - 2 |
| 69 | 8.395 | 8.185 | 7.784 | 7.356 | 7.073 | 6.903 | 6.711 | 6.507 | 6.421 | 6.433 | 6.290 | 5.820 | 5.191 | 4.655 | 4.253 | 3.898 | 3.600 |
| 70 | 7.242 | 7.055 | 6.697 | 6.318 | 6.072 | 5.929 | 5.760 | 5.573 | 5.491 | 5.504 | 5.393 | 4.998 | 4.465 | 4.013 | 3.675 | 3.372 | 3.113 |
| 71 | 6.231 | 6.067 | 5.749 | 5.414 | 5.201 | 5.081 | 4.933 | 4.763 | 4.685 | 4.699 | 4.614 | 4.286 | 3.836 | 3.456 | 3.173 | 2.915 | 2.690 |
| 72 | 5.346 | 5.204 | 4.924 | 4.628 | 4.444 | 4.343 | 4.215 | 4.062 | 3.989 | 4.004 | 3.941 | 3.669 | 3.291 | 2.973 | 2.737 | 2.518 | 2.322 |
| 73 | 4.573 | 4.451 | 4.206 | 3.947 | 3.788 | 3.704 | 3.593 | 3.457 | 3.390 | 3.405 | 3.356 | 3.136 | 2.820 | 2.555 | 2.359 | 2.173 | 2.003 |
| 74 | 3.900 | 3.792 | 3.584 | 3.358 | 3.221 | 3.150 | 3.056 | 2.936 | 2.876 | 2.891 | 2.858 | 2.675 | 2.413 | 2.193 | 2.031 | 1.873 | 1.726 |
| 75 | 3.315 | 3.229 | 3.046 | 2.849 | 2.731 | 2.673 | 2.594 | 2.490 | 2.437 | 2.450 | 2.427 | 2.279 | 2.062 | 1.881 | 1.747 | 1.614 | 1.487 |
| 76 | 2.807 | 2.736 | 2.580 | 2.411 | 2.310 | 2.262 | 2.196 | 2.108 | 2.062 | 2.074 | 2.059 | 1.938 | 1.759 | 1.611 | 1.502 | 1.389 | 1.281 |
| 77 | 2.367 | 2.310 | 2.179 | 2.035 | 1.949 | 1.910 | 1.856 | 1.782 | 1.744 | 1.755 | 1.744 | 1.646 | 1.500 | 1.379 | 1.289 | 1.195 | 1.102 |
| 78 | 1.987 | 1.942 | 1.833 | 1.712 | 1.640 | 1.609 | 1.567 | 1.507 | 1.475 | 1.484 | 1.476 | 1.397 | 1.277 | 1.179 | 1.106 | 1.028 | 0.949 |
| 79 | 1.660 | 1.625 | 1.537 | 1.436 | 1.377 | 1.354 | 1.322 | 1.274 | 1.248 | 1.256 | 1.250 | 1.184 | 1.087 | 1.008 | 0.949 | 0.884 | 0.817 |
| 80 | 1.379 | 1.353 | 1.282 | 1.201 | 1.154 | 1.138 | 1.115 | 1.078 | 1.058 | 1.064 | 1.059 | 1.004 | 0.925 | 0.861 | 0.815 | 0.761 | 0.703 |

(1 MBAR = 100 NEWTON/M SQ)

ZONAL MEAN PRESSURE (MB)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 7.330 | 7.384 | 7.489 | 7.649 | 7.826 | 7.944 | 7.953 | 7.898 | 7.863 | 7.866 | 7.832 | 7.691 | 7.457 | 7.190 | 6.921 | 6.656 | 6.440 | + 1 |
| 19 | 6.332 | 6.370 | 6.441 | 6.546 | 6.660 | 6.728 | 6.721 | 6.673 | 6.646 | 6.650 | 6.629 | 6.528 | 6.351 | 6.135 | 5.896 | 5.643 | 5.434 | |
| 20 | 5.473 | 5.492 | 5.542 | 5.602 | 5.674 | 5.709 | 5.692 | 5.650 | 5.628 | 5.631 | 5.616 | 5.542 | 5.409 | 5.233 | 5.018 | 4.777 | 4.575 | |
| 21 | 4.732 | 4.746 | 4.770 | 4.805 | 4.841 | 4.854 | 4.831 | 4.794 | 4.774 | 4.775 | 4.764 | 4.710 | 4.609 | 4.464 | 4.268 | 4.039 | 3.843 | |
| 22 | 4.094 | 4.100 | 4.108 | 4.122 | 4.136 | 4.134 | 4.109 | 4.076 | 4.058 | 4.057 | 4.047 | 4.008 | 3.930 | 3.808 | 3.630 | 3.412 | 3.225 | |
| 23 | 3.545 | 3.544 | 3.541 | 3.540 | 3.538 | 3.527 | 3.502 | 3.472 | 3.456 | 3.453 | 3.445 | 3.415 | 3.354 | 3.250 | 3.087 | 2.881 | 2.704 | |
| 24 | 3.072 | 3.067 | 3.055 | 3.043 | 3.031 | 3.015 | 2.990 | 2.964 | 2.949 | 2.945 | 2.938 | 2.914 | 2.865 | 2.775 | 2.625 | 2.432 | 2.266 | |
| 25 | 2.665 | 2.656 | 2.639 | 2.619 | 2.601 | 2.582 | 2.558 | 2.535 | 2.521 | 2.517 | 2.510 | 2.491 | 2.450 | 2.370 | 2.232 | 2.054 | 1.900 | |
| 26 | 2.314 | 2.303 | 2.282 | 2.258 | 2.236 | 2.215 | 2.193 | 2.173 | 2.160 | 2.155 | 2.149 | 2.133 | 2.097 | 2.025 | 1.899 | 1.735 | 1.594 | |
| 27 | 2.011 | 1.999 | 1.976 | 1.949 | 1.925 | 1.904 | 1.884 | 1.865 | 1.854 | 1.850 | 1.844 | 1.829 | 1.797 | 1.731 | 1.615 | 1.466 | 1.338 | |
| 28 | 1.750 | 1.737 | 1.714 | 1.685 | 1.660 | 1.640 | 1.621 | 1.605 | 1.595 | 1.591 | 1.585 | 1.571 | 1.541 | 1.480 | 1.375 | 1.240 | 1.126 | |
| 29 | 1.524 | 1.512 | 1.488 | 1.460 | 1.435 | 1.415 | 1.397 | 1.383 | 1.374 | 1.371 | 1.365 | 1.352 | 1.323 | 1.267 | 1.171 | 1.050 | 0.948 | |
| 30 | 1.330 | 1.317 | 1.294 | 1.267 | 1.242 | 1.223 | 1.207 | 1.194 | 1.186 | 1.183 | 1.178 | 1.165 | 1.137 | 1.084 | 0.997 | 0.890 | 0.801 | |
| 31 | 1.161 | 1.150 | 1.128 | 1.101 | 1.077 | 1.059 | 1.044 | 1.033 | 1.026 | 1.024 | 1.019 | 1.005 | 0.978 | 0.929 | 0.850 | 0.755 | 0.677 | |
| 32 | 1.016 | 1.005 | 0.984 | 0.959 | 0.936 | 0.919 | 0.905 | 0.895 | 0.889 | 0.887 | 0.883 | 0.869 | 0.842 | 0.796 | 0.726 | 0.642 | 0.574 | |
| 33 | 8.893 | 8.791 | 8.598 | 8.361 | 8.150 | 7.990 | 7.864 | 7.768 | 7.719 | 7.703 | 7.659 | 7.525 | 7.265 | 6.832 | 6.198 | 5.468 | 4.883 | + 0 |
| 34 | 7.798 | 7.704 | 7.526 | 7.306 | 7.109 | 6.959 | 6.841 | 6.754 | 6.711 | 6.700 | 6.659 | 6.527 | 6.273 | 5.868 | 5.301 | 4.665 | 4.162 | |
| 35 | 6.846 | 6.762 | 6.598 | 6.395 | 6.211 | 6.071 | 5.962 | 5.882 | 5.844 | 5.836 | 5.798 | 5.670 | 5.425 | 5.047 | 4.540 | 3.987 | 3.556 | |
| 36 | 6.019 | 5.942 | 5.794 | 5.606 | 5.437 | 5.306 | 5.204 | 5.130 | 5.097 | 5.092 | 5.058 | 4.934 | 4.698 | 4.346 | 3.893 | 3.414 | 3.047 | |
| 37 | 5.298 | 5.230 | 5.095 | 4.923 | 4.766 | 4.645 | 4.550 | 4.481 | 4.452 | 4.449 | 4.418 | 4.300 | 4.074 | 3.749 | 3.345 | 2.930 | 2.617 | |
| 38 | 4.670 | 4.609 | 4.486 | 4.330 | 4.185 | 4.072 | 3.983 | 3.919 | 3.893 | 3.893 | 3.865 | 3.753 | 3.539 | 3.238 | 2.879 | 2.520 | 2.253 | |
| 39 | 4.121 | 4.066 | 3.956 | 3.813 | 3.680 | 3.576 | 3.492 | 3.433 | 3.409 | 3.410 | 3.386 | 3.280 | 3.079 | 2.802 | 2.482 | 2.171 | 1.944 | |
| 40 | 3.641 | 3.592 | 3.492 | 3.362 | 3.240 | 3.144 | 3.066 | 3.010 | 2.988 | 2.991 | 2.970 | 2.872 | 2.683 | 2.429 | 2.144 | 1.875 | 1.682 | |
| 41 | 3.220 | 3.177 | 3.087 | 2.968 | 2.857 | 2.767 | 2.695 | 2.642 | 2.622 | 2.626 | 2.608 | 2.517 | 2.342 | 2.108 | 1.855 | 1.623 | 1.458 | |
| 42 | 2.852 | 2.813 | 2.731 | 2.623 | 2.521 | 2.439 | 2.371 | 2.322 | 2.303 | 2.308 | 2.292 | 2.209 | 2.046 | 1.834 | 1.608 | 1.407 | 1.266 | |
| 43 | 2.527 | 2.493 | 2.418 | 2.320 | 2.227 | 2.151 | 2.088 | 2.042 | 2.025 | 2.030 | 2.017 | 1.940 | 1.791 | 1.597 | 1.397 | 1.222 | 1.102 | |
| 44 | 2.242 | 2.211 | 2.143 | 2.054 | 1.969 | 1.899 | 1.841 | 1.798 | 1.782 | 1.787 | 1.776 | 1.706 | 1.569 | 1.393 | 1.215 | 1.063 | 0.961 | |
| 45 | 1.990 | 1.962 | 1.901 | 1.819 | 1.741 | 1.677 | 1.624 | 1.583 | 1.568 | 1.574 | 1.565 | 1.501 | 1.376 | 1.217 | 1.059 | 0.927 | 0.839 | |
| 46 | 1.768 | 1.742 | 1.686 | 1.612 | 1.541 | 1.483 | 1.433 | 1.396 | 1.382 | 1.387 | 1.380 | 1.322 | 1.207 | 1.064 | 0.924 | 0.809 | 0.733 | |
| 47 | 1.572 | 1.548 | 1.497 | 1.429 | 1.364 | 1.311 | 1.265 | 1.231 | 1.218 | 1.223 | 1.217 | 1.164 | 1.060 | 0.931 | 0.807 | 0.707 | 0.642 | |
| 48 | 1.398 | 1.376 | 1.329 | 1.267 | 1.208 | 1.159 | 1.117 | 1.085 | 1.073 | 1.078 | 1.073 | 1.026 | 0.931 | 0.816 | 0.706 | 0.619 | 0.563 | |
| 49 | 1.243 | 1.223 | 1.180 | 1.123 | 1.070 | 1.025 | 0.987 | 0.957 | 0.946 | 0.951 | 0.947 | 0.904 | 0.818 | 0.715 | 0.618 | 0.542 | 0.494 | |
| 50 | 1.106 | 1.087 | 1.047 | 0.996 | 0.947 | 0.907 | 0.872 | 0.845 | 0.835 | 0.839 | 0.835 | 0.796 | 0.719 | 0.627 | 0.542 | 0.476 | 0.433 | |
| 51 | 9.840 | 9.663 | 9.296 | 8.822 | 8.382 | 8.018 | 7.698 | 7.452 | 7.360 | 7.402 | 7.365 | 7.007 | 6.312 | 5.492 | 4.748 | 4.172 | 3.804 | - 1 |
| 52 | 8.753 | 8.588 | 8.248 | 7.814 | 7.415 | 7.086 | 6.796 | 6.572 | 6.490 | 6.529 | 6.493 | 6.165 | 5.540 | 4.814 | 4.163 | 3.662 | 3.342 | |
| 53 | 7.784 | 7.628 | 7.314 | 6.917 | 6.556 | 6.259 | 5.997 | 5.794 | 5.721 | 5.756 | 5.722 | 5.421 | 4.859 | 4.217 | 3.650 | 3.215 | 2.937 | |
| 54 | 6.919 | 6.773 | 6.481 | 6.118 | 5.791 | 5.524 | 5.288 | 5.106 | 5.041 | 5.073 | 5.038 | 4.762 | 4.258 | 3.693 | 3.199 | 2.823 | 2.581 | |
| 55 | 6.146 | 6.009 | 5.739 | 5.407 | 5.111 | 4.871 | 4.659 | 4.496 | 4.439 | 4.468 | 4.433 | 4.179 | 3.727 | 3.231 | 2.803 | 2.478 | 2.268 | |
| 56 | 5.456 | 5.326 | 5.076 | 4.773 | 4.506 | 4.291 | 4.102 | 3.956 | 3.906 | 3.932 | 3.897 | 3.663 | 3.259 | 2.824 | 2.455 | 2.175 | 1.992 | |
| 57 | 4.838 | 4.716 | 4.485 | 4.208 | 3.967 | 3.775 | 3.607 | 3.477 | 3.435 | 3.458 | 3.421 | 3.207 | 2.846 | 2.466 | 2.149 | 1.908 | 1.749 | |
| 58 | 4.286 | 4.171 | 3.958 | 3.705 | 3.488 | 3.317 | 3.167 | 3.053 | 3.017 | 3.038 | 3.001 | 2.803 | 2.481 | 2.151 | 1.879 | 1.672 | 1.534 | |
| 59 | 3.792 | 3.685 | 3.488 | 3.252 | 3.062 | 2.910 | 2.778 | 2.678 | 2.647 | 2.665 | 2.628 | 2.447 | 2.161 | 1.874 | 1.642 | 1.465 | 1.345 | |
| 60 | 3.350 | 3.250 | 3.068 | 2.859 | 2.684 | 2.549 | 2.432 | 2.345 | 2.319 | 2.335 | 2.299 | 2.133 | 1.879 | 1.631 | 1.434 | 1.283 | 1.179 | |
| 61 | 2.955 | 2.862 | 2.695 | 2.505 | 2.348 | 2.229 | 2.126 | 2.050 | 2.028 | 2.043 | 2.007 | 1.857 | 1.632 | 1.418 | 1.251 | 1.122 | 1.032 | |
| 62 | 2.602 | 2.516 | 2.363 | 2.190 | 2.050 | 1.945 | 1.855 | 1.789 | 1.771 | 1.784 | 1.750 | 1.614 | 1.415 | 1.232 | 1.090 | 0.980 | 0.902 | |
| 63 | 2.286 | 2.207 | 2.067 | 1.911 | 1.786 | 1.694 | 1.616 | 1.558 | 1.544 | 1.555 | 1.523 | 1.400 | 1.226 | 1.068 | 0.949 | 0.856 | 0.788 | |
| 64 | 2.005 | 1.932 | 1.805 | 1.664 | 1.553 | 1.472 | 1.404 | 1.355 | 1.343 | 1.353 | 1.323 | 1.213 | 1.061 | 0.926 | 0.825 | 0.746 | 0.687 | |
| 65 | 1.754 | 1.688 | 1.572 | 1.446 | 1.347 | 1.276 | 1.218 | 1.175 | 1.166 | 1.175 | 1.147 | 1.049 | 0.917 | 0.801 | 0.717 | 0.650 | 0.599 | |
| 66 | 1.531 | 1.471 | 1.367 | 1.253 | 1.165 | 1.104 | 1.054 | 1.017 | 1.010 | 1.017 | 0.993 | 0.906 | 0.791 | 0.693 | 0.622 | 0.565 | 0.521 | |
| 67 | 1.333 | 1.278 | 1.185 | 1.083 | 1.006 | 0.952 | 0.910 | 0.879 | 0.872 | 0.879 | 0.857 | 0.782 | 0.682 | 0.599 | 0.540 | 0.491 | 0.453 | |
| 68 | 1.157 | 1.108 | 1.024 | 0.934 | 0.866 | 0.820 | 0.783 | 0.757 | 0.752 | 0.758 | 0.738 | 0.673 | 0.588 | 0.518 | 0.467 | 0.426 | 0.393 | |
| 69 | 1.002 | 0.958 | 0.883 | 0.803 | 0.743 | 0.704 | 0.673 | 0.651 | 0.646 | 0.651 | 0.635 | 0.579 | 0.506 | 0.447 | 0.405 | 0.370 | 0.341 | |
| 70 | 8.644 | 8.255 | 7.589 | 6.882 | 6.362 | 6.028 | 5.768 | 5.578 | 5.539 | 5.584 | 5.445 | 4.967 | 4.350 | 3.851 | 3.500 | 3.202 | 2.951 | - 2 |
| 71 | 7.433 | 7.090 | 6.503 | 5.882 | 5.432 | 5.150 | 4.932 | 4.771 | 4.736 | 4.775 | 4.659 | 4.256 | 3.736 | 3.318 | 3.024 | 2.771 | 2.554 | |
| 72 | 6.369 | 6.068 | 5.554 | 5.012 | 4.624 | 4.388 | 4.207 | 4.071 | 4.039 | 4.072 | 3.977 | 3.641 | 3.205 | 2.856 | 2.611 | 2.395 | 2.207 | |
| 73 | 5.436 | 5.174 | 4.727 | 4.252 | 3.926 | 3.730 | 3.581 | 3.466 | 3.437 | 3.465 | 3.388 | 3.109 | 2.747 | 2.456 | 2.252 | 2.068 | 1.907 | |
| 74 | 4.620 | 4.395 | 4.008 | 3.605 | 3.324 | 3.162 | 3.041 | 2.944 | 2.918 | 2.940 | 2.879 | 2.651 | 2.351 | 2.110 | 1.940 | 1.785 | 1.646 | |
| 75 | 3.909 | 3.717 | 3.385 | 3.042 | 2.806 | 2.675 | 2.578 | 2.497 | 2.472 | 2.490 | 2.442 | 2.256 | 2.009 | 1.811 | 1.670 | 1.539 | 1.420 | |
| 76 | 3.292 | 3.129 | 2.848 | 2.558 | 2.363 | 2.258 | 2.181 | 2.114 | 2.091 | 2.106 | 2.068 | 1.917 | 1.714 | 1.552 | 1.436 | 1.326 | 1.225 | |
| 77 | 2.758 | 2.621 | 2.385 | 2.144 | 1.984 | 1.903 | 1.843 | 1.788 | 1.767 | 1.778 | 1.748 | 1.626 | 1.461 | 1.329 | 1.233 | 1.142 | 1.056 | |
| 78 | 2.298 | 2.184 | 1.989 | 1.790 | 1.662 | 1.600 | 1.555 | 1.510 | 1.492 | 1.500 | 1.477 | 1.378 | 1.244 | 1.136 | 1.059 | 0.983 | 0.911 | |
| 79 | 1.902 | 1.809 | 1.650 | 1.489 | 1.389 | 1.344 | 1.311 | 1.276 | 1.260 | 1.266 | 1.247 | 1.167 | 1.059 | 0.972 | 0.908 | 0.846 | 0.785 | |
| 80 | 1.565 | 1.489 | 1.362 | 1.235 | 1.158 | 1.127 | 1.105 | 1.078 | 1.065 | 1.069 | 1.054 | 0.989 | 0.902 | 0.831 | 0.780 | 0.728 | 0.677 | |

(1 MBAR = 100 NEWTON/M SQ)

ZONAL MEAN DENSITY (KG/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.117 | 1.124 | 1.152 | 1.207 | 1.274 | 1.326 | 1.347 | 1.348 | 1.348 | 1.344 | 1.319 | 1.263 | 1.193 | 1.140 | 1.116 | 1.110 | 1.111 | - 1 |
| 19 | 0.965 | 0.970 | 0.991 | 1.030 | 1.077 | 1.112 | 1.126 | 1.128 | 1.130 | 1.132 | 1.115 | 1.073 | 1.019 | 0.976 | 0.955 | 0.950 | 0.949 | |
| | | | | | | | | | | | | | | | | | | |
| 20 | 8.318 | 8.359 | 8.512 | 8.793 | 9.116 | 9.349 | 9.437 | 9.453 | 9.487 | 9.512 | 9.402 | 9.090 | 8.674 | 8.330 | 8.142 | 8.070 | 8.042 | - 2 |
| 21 | 7.165 | 7.197 | 7.308 | 7.507 | 7.730 | 7.883 | 7.934 | 7.942 | 7.969 | 7.992 | 7.915 | 7.686 | 7.372 | 7.096 | 6.923 | 6.827 | 6.768 | |
| 22 | 6.170 | 6.193 | 6.272 | 6.412 | 6.564 | 6.661 | 6.688 | 6.687 | 6.704 | 6.720 | 6.664 | 6.499 | 6.264 | 6.043 | 5.878 | 5.758 | 5.672 | |
| 23 | 5.313 | 5.328 | 5.384 | 5.480 | 5.580 | 5.640 | 5.650 | 5.642 | 5.648 | 5.656 | 5.617 | 5.499 | 5.327 | 5.147 | 4.988 | 4.849 | 4.742 | |
| 24 | 4.575 | 4.585 | 4.622 | 4.686 | 4.750 | 4.784 | 4.782 | 4.769 | 4.767 | 4.769 | 4.741 | 4.660 | 4.535 | 4.387 | 4.233 | 4.081 | 3.959 | |
| 25 | 3.942 | 3.947 | 3.970 | 4.010 | 4.049 | 4.064 | 4.055 | 4.038 | 4.031 | 4.029 | 4.010 | 3.956 | 3.866 | 3.743 | 3.594 | 3.435 | 3.305 | |
| 26 | 3.398 | 3.399 | 3.411 | 3.435 | 3.455 | 3.458 | 3.443 | 3.425 | 3.415 | 3.410 | 3.398 | 3.364 | 3.300 | 3.197 | 3.054 | 2.893 | 2.762 | |
| 27 | 2.931 | 2.929 | 2.934 | 2.944 | 2.952 | 2.946 | 2.929 | 2.910 | 2.898 | 2.893 | 2.886 | 2.866 | 2.820 | 2.732 | 2.597 | 2.440 | 2.311 | |
| 28 | 2.529 | 2.525 | 2.525 | 2.527 | 2.525 | 2.514 | 2.495 | 2.477 | 2.464 | 2.459 | 2.456 | 2.446 | 2.413 | 2.337 | 2.211 | 2.061 | 1.938 | |
| 29 | 2.185 | 2.179 | 2.175 | 2.171 | 2.162 | 2.148 | 2.128 | 2.111 | 2.099 | 2.094 | 2.094 | 2.090 | 2.066 | 2.001 | 1.885 | 1.744 | 1.630 | |
| | | | | | | | | | | | | | | | | | | |
| 30 | 1.889 | 1.883 | 1.875 | 1.867 | 1.855 | 1.837 | 1.818 | 1.802 | 1.791 | 1.787 | 1.788 | 1.788 | 1.771 | 1.713 | 1.608 | 1.479 | 1.374 | |
| 31 | 1.634 | 1.628 | 1.619 | 1.608 | 1.593 | 1.574 | 1.556 | 1.541 | 1.531 | 1.528 | 1.530 | 1.532 | 1.518 | 1.468 | 1.374 | 1.257 | 1.162 | |
| 32 | 1.415 | 1.409 | 1.399 | 1.386 | 1.370 | 1.351 | 1.333 | 1.319 | 1.311 | 1.308 | 1.311 | 1.313 | 1.303 | 1.259 | 1.175 | 1.071 | 0.986 | |
| 33 | 1.226 | 1.221 | 1.211 | 1.197 | 1.180 | 1.161 | 1.144 | 1.131 | 1.124 | 1.123 | 1.125 | 1.127 | 1.118 | 1.080 | 1.006 | 0.914 | 0.838 | |
| 34 | 1.064 | 1.059 | 1.049 | 1.035 | 1.018 | 0.999 | 0.983 | 0.972 | 0.966 | 0.965 | 0.967 | 0.969 | 0.960 | 0.927 | 0.863 | 0.782 | 0.715 | |
| 35 | 9.245 | 9.196 | 9.104 | 8.966 | 8.794 | 8.617 | 8.465 | 8.361 | 8.311 | 8.302 | 8.319 | 8.330 | 8.252 | 7.964 | 7.404 | 6.699 | 6.121 | - 3 |
| 36 | 8.041 | 7.998 | 7.911 | 7.777 | 7.611 | 7.441 | 7.299 | 7.205 | 7.162 | 7.157 | 7.169 | 7.171 | 7.097 | 6.846 | 6.363 | 5.753 | 5.250 | |
| 37 | 7.002 | 6.966 | 6.885 | 6.757 | 6.599 | 6.438 | 6.305 | 6.219 | 6.183 | 6.180 | 6.187 | 6.180 | 6.109 | 5.891 | 5.476 | 4.950 | 4.514 | |
| 38 | 6.106 | 6.075 | 6.002 | 5.881 | 5.731 | 5.579 | 5.455 | 5.377 | 5.346 | 5.344 | 5.347 | 5.333 | 5.265 | 5.074 | 4.719 | 4.267 | 3.890 | |
| 39 | 5.333 | 5.307 | 5.240 | 5.127 | 4.985 | 4.844 | 4.728 | 4.657 | 4.630 | 4.629 | 4.629 | 4.609 | 4.543 | 4.377 | 4.073 | 3.684 | 3.358 | |
| | | | | | | | | | | | | | | | | | | |
| 40 | 4.664 | 4.643 | 4.583 | 4.478 | 4.345 | 4.213 | 4.106 | 4.040 | 4.017 | 4.017 | 4.013 | 3.990 | 3.926 | 3.781 | 3.520 | 3.186 | 2.904 | |
| 41 | 4.086 | 4.069 | 4.015 | 3.917 | 3.794 | 3.671 | 3.571 | 3.511 | 3.491 | 3.491 | 3.486 | 3.460 | 3.399 | 3.272 | 3.047 | 2.759 | 2.515 | |
| 42 | 3.585 | 3.572 | 3.523 | 3.433 | 3.318 | 3.204 | 3.112 | 3.057 | 3.039 | 3.039 | 3.033 | 3.006 | 2.948 | 2.836 | 2.642 | 2.393 | 2.181 | |
| 43 | 3.151 | 3.140 | 3.096 | 3.013 | 2.908 | 2.802 | 2.717 | 2.666 | 2.650 | 2.651 | 2.644 | 2.616 | 2.563 | 2.463 | 2.294 | 2.078 | 1.893 | |
| 44 | 2.774 | 2.766 | 2.726 | 2.650 | 2.552 | 2.455 | 2.376 | 2.329 | 2.315 | 2.316 | 2.309 | 2.283 | 2.232 | 2.143 | 1.996 | 1.807 | 1.645 | |
| 45 | 2.446 | 2.440 | 2.404 | 2.334 | 2.244 | 2.154 | 2.082 | 2.039 | 2.025 | 2.027 | 2.021 | 1.996 | 1.949 | 1.869 | 1.739 | 1.573 | 1.431 | |
| 46 | 2.161 | 2.156 | 2.124 | 2.059 | 1.976 | 1.894 | 1.827 | 1.787 | 1.775 | 1.777 | 1.772 | 1.749 | 1.705 | 1.633 | 1.517 | 1.371 | 1.246 | |
| 47 | 1.912 | 1.908 | 1.879 | 1.820 | 1.743 | 1.668 | 1.606 | 1.569 | 1.558 | 1.561 | 1.557 | 1.535 | 1.495 | 1.429 | 1.326 | 1.196 | 1.085 | |
| 48 | 1.695 | 1.691 | 1.664 | 1.610 | 1.540 | 1.471 | 1.414 | 1.380 | 1.370 | 1.373 | 1.370 | 1.351 | 1.314 | 1.253 | 1.160 | 1.044 | 0.946 | |
| 49 | 1.504 | 1.501 | 1.477 | 1.427 | 1.363 | 1.299 | 1.247 | 1.215 | 1.206 | 1.210 | 1.208 | 1.191 | 1.156 | 1.101 | 1.017 | 0.913 | 0.826 | |
| | | | | | | | | | | | | | | | | | | |
| 50 | 1.337 | 1.334 | 1.311 | 1.266 | 1.207 | 1.149 | 1.101 | 1.072 | 1.064 | 1.068 | 1.067 | 1.052 | 1.019 | 0.968 | 0.892 | 0.799 | 0.721 | |
| 51 | 1.190 | 1.187 | 1.166 | 1.124 | 1.070 | 1.017 | 0.973 | 0.947 | 0.939 | 0.943 | 0.944 | 0.930 | 0.900 | 0.852 | 0.783 | 0.700 | 0.631 | |
| 52 | 1.060 | 1.057 | 1.038 | 0.999 | 0.950 | 0.901 | 0.861 | 0.837 | 0.830 | 0.835 | 0.836 | 0.823 | 0.795 | 0.751 | 0.688 | 0.613 | 0.552 | |
| 53 | 9.458 | 9.427 | 9.245 | 8.889 | 8.440 | 7.996 | 7.631 | 7.407 | 7.348 | 7.392 | 7.406 | 7.291 | 7.028 | 6.618 | 6.044 | 5.378 | 4.832 | - 4 |
| 54 | 8.444 | 8.411 | 8.240 | 7.912 | 7.502 | 7.098 | 6.765 | 6.561 | 6.509 | 6.552 | 6.568 | 6.460 | 6.213 | 5.833 | 5.313 | 4.719 | 4.236 | |
| 55 | 7.543 | 7.509 | 7.348 | 7.045 | 6.671 | 6.303 | 6.001 | 5.816 | 5.770 | 5.811 | 5.827 | 5.725 | 5.491 | 5.140 | 4.671 | 4.143 | 3.717 | |
| 56 | 6.741 | 6.706 | 6.554 | 6.274 | 5.932 | 5.599 | 5.325 | 5.158 | 5.117 | 5.157 | 5.170 | 5.071 | 4.850 | 4.525 | 4.105 | 3.639 | 3.265 | |
| 57 | 6.027 | 5.990 | 5.846 | 5.587 | 5.275 | 4.973 | 4.726 | 4.576 | 4.540 | 4.577 | 4.586 | 4.488 | 4.278 | 3.981 | 3.606 | 3.197 | 2.870 | |
| 58 | 5.389 | 5.351 | 5.214 | 4.974 | 4.689 | 4.416 | 4.194 | 4.060 | 4.029 | 4.062 | 4.066 | 3.969 | 3.769 | 3.497 | 3.165 | 2.809 | 2.525 | |
| 59 | 4.819 | 4.779 | 4.649 | 4.426 | 4.166 | 3.919 | 3.721 | 3.602 | 3.575 | 3.604 | 3.602 | 3.504 | 3.315 | 3.068 | 2.776 | 2.468 | 2.223 | |
| | | | | | | | | | | | | | | | | | | |
| 60 | 4.307 | 4.267 | 4.143 | 3.936 | 3.698 | 3.476 | 3.299 | 3.194 | 3.172 | 3.196 | 3.188 | 3.090 | 2.911 | 2.682 | 2.432 | 2.167 | 1.959 | |
| 61 | 3.849 | 3.808 | 3.689 | 3.497 | 3.279 | 3.079 | 2.923 | 2.832 | 2.813 | 2.833 | 2.818 | 2.720 | 2.551 | 2.349 | 2.128 | 1.903 | 1.726 | |
| 62 | 3.438 | 3.397 | 3.283 | 3.103 | 2.904 | 2.724 | 2.587 | 2.508 | 2.493 | 2.508 | 2.488 | 2.389 | 2.231 | 2.050 | 1.859 | 1.670 | 1.520 | |
| 63 | 3.068 | 3.027 | 2.918 | 2.750 | 2.567 | 2.407 | 2.286 | 2.219 | 2.208 | 2.219 | 2.193 | 2.095 | 1.947 | 1.785 | 1.623 | 1.464 | 1.339 | |
| 64 | 2.736 | 2.695 | 2.591 | 2.433 | 2.266 | 2.122 | 2.018 | 1.962 | 1.953 | 1.960 | 1.930 | 1.834 | 1.696 | 1.552 | 1.414 | 1.282 | 1.179 | |
| 65 | 2.437 | 2.397 | 2.297 | 2.150 | 1.996 | 1.868 | 1.778 | 1.731 | 1.725 | 1.729 | 1.696 | 1.602 | 1.474 | 1.347 | 1.231 | 1.121 | 1.036 | |
| 66 | 2.169 | 2.129 | 2.033 | 1.895 | 1.754 | 1.640 | 1.563 | 1.525 | 1.521 | 1.523 | 1.487 | 1.397 | 1.280 | 1.168 | 1.069 | 0.980 | 0.910 | |
| 67 | 1.928 | 1.888 | 1.797 | 1.667 | 1.538 | 1.437 | 1.371 | 1.341 | 1.340 | 1.339 | 1.302 | 1.217 | 1.109 | 1.011 | 0.928 | 0.855 | 0.798 | |
| 68 | 1.711 | 1.672 | 1.585 | 1.464 | 1.345 | 1.255 | 1.200 | 1.177 | 1.177 | 1.175 | 1.138 | 1.058 | 0.960 | 0.874 | 0.804 | 0.745 | 0.698 | |
| 69 | 1.515 | 1.478 | 1.395 | 1.282 | 1.173 | 1.094 | 1.048 | 1.031 | 1.032 | 1.029 | 0.993 | 0.919 | 0.831 | 0.755 | 0.697 | 0.647 | 0.610 | |
| | | | | | | | | | | | | | | | | | | |
| 70 | 1.340 | 1.304 | 1.225 | 1.120 | 1.021 | 0.951 | 0.912 | 0.900 | 0.903 | 0.899 | 0.865 | 0.797 | 0.718 | 0.652 | 0.602 | 0.562 | 0.531 | |
| 71 | 1.182 | 1.148 | 1.074 | 0.975 | 0.885 | 0.824 | 0.792 | 0.784 | 0.788 | 0.784 | 0.752 | 0.690 | 0.620 | 0.563 | 0.521 | 0.487 | 0.462 | |
| 72 | 1.041 | 1.008 | 0.938 | 0.847 | 0.766 | 0.712 | 0.686 | 0.681 | 0.685 | 0.682 | 0.652 | 0.597 | 0.536 | 0.486 | 0.450 | 0.422 | 0.401 | |
| 73 | 9.137 | 8.825 | 8.176 | 7.340 | 6.604 | 6.134 | 5.923 | 5.895 | 5.941 | 5.907 | 5.648 | 5.162 | 4.623 | 4.189 | 3.880 | 3.642 | 3.465 | - 5 |
| 74 | 7.995 | 7.704 | 7.104 | 6.340 | 5.679 | 5.270 | 5.099 | 5.087 | 5.134 | 5.106 | 4.878 | 4.456 | 3.989 | 3.613 | 3.346 | 3.143 | 2.992 | |
| 75 | 6.970 | 6.702 | 6.152 | 5.459 | 4.870 | 4.515 | 4.376 | 4.375 | 4.420 | 4.397 | 4.202 | 3.841 | 3.439 | 3.115 | 2.884 | 2.709 | 2.580 | |
| 76 | 6.052 | 5.808 | 5.308 | 4.685 | 4.165 | 3.859 | 3.745 | 3.749 | 3.790 | 3.772 | 3.610 | 3.304 | 2.962 | 2.684 | 2.484 | 2.333 | 2.221 | |
| 77 | 5.231 | 5.011 | 4.562 | 4.008 | 3.552 | 3.290 | 3.195 | 3.201 | 3.236 | 3.223 | 3.090 | 2.835 | 2.546 | 2.309 | 2.139 | 2.008 | 1.912 | |
| 78 | 4.497 | 4.303 | 3.905 | 3.418 | 3.022 | 2.798 | 2.719 | 2.722 | 2.750 | 2.741 | 2.634 | 2.424 | 2.183 | 1.984 | 1.840 | 1.729 | 1.647 | |
| 79 | 3.844 | 3.675 | 3.327 | 2.905 | 2.565 | 2.375 | 2.308 | 2.306 | 2.326 | 2.319 | 2.235 | 2.065 | 1.865 | 1.699 | 1.581 | 1.489 | 1.421 | |
| | | | | | | | | | | | | | | | | | | |
| 80 | 3.264 | 3.120 | 2.821 | 2.460 | 2.172 | 2.013 | 1.954 | 1.946 | 1.957 | 1.951 | 1.887 | 1.749 | 1.585 | 1.450 | 1.356 | 1.285 | 1.230 | |

38

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.102 | 1.122 | 1.162 | 1.221 | 1.282 | 1.325 | 1.346 | 1.356 | 1.364 | 1.363 | 1.335 | 1.275 | 1.201 | 1.137 | 1.096 | 1.073 | 1.060 | - 1 |
| 19 | 0.951 | 0.968 | 1.000 | 1.044 | 1.088 | 1.117 | 1.130 | 1.137 | 1.146 | 1.149 | 1.130 | 1.084 | 1.025 | 0.974 | 0.940 | 0.922 | 0.913 | |
| 20 | 8.197 | 8.331 | 8.584 | 8.920 | 9.232 | 9.420 | 9.491 | 9.537 | 9.611 | 9.648 | 9.519 | 9.181 | 8.732 | 8.324 | 8.043 | 7.877 | 7.786 | - 2 |
| 21 | 7.058 | 7.162 | 7.359 | 7.615 | 7.837 | 7.953 | 7.980 | 8.001 | 8.055 | 8.087 | 8.000 | 7.760 | 7.430 | 7.113 | 6.869 | 6.700 | 6.592 | |
| 22 | 6.073 | 6.152 | 6.305 | 6.499 | 6.657 | 6.722 | 6.720 | 6.720 | 6.754 | 6.778 | 6.721 | 6.555 | 6.320 | 6.078 | 5.862 | 5.685 | 5.560 | |
| 23 | 5.223 | 5.282 | 5.401 | 5.549 | 5.659 | 5.690 | 5.668 | 5.654 | 5.673 | 5.688 | 5.650 | 5.540 | 5.378 | 5.193 | 5.002 | 4.820 | 4.681 | |
| 24 | 4.491 | 4.536 | 4.627 | 4.740 | 4.816 | 4.823 | 4.789 | 4.767 | 4.774 | 4.782 | 4.757 | 4.687 | 4.580 | 4.439 | 4.267 | 4.085 | 3.941 | |
| 25 | 3.862 | 3.895 | 3.966 | 4.051 | 4.102 | 4.094 | 4.055 | 4.027 | 4.026 | 4.030 | 4.014 | 3.972 | 3.902 | 3.794 | 3.641 | 3.465 | 3.322 | |
| 26 | 3.321 | 3.346 | 3.401 | 3.465 | 3.498 | 3.481 | 3.439 | 3.410 | 3.404 | 3.404 | 3.395 | 3.371 | 3.328 | 3.244 | 3.108 | 2.942 | 2.805 | |
| 27 | 2.857 | 2.876 | 2.919 | 2.967 | 2.986 | 2.963 | 2.922 | 2.893 | 2.885 | 2.884 | 2.878 | 2.867 | 2.840 | 2.774 | 2.654 | 2.501 | 2.373 | |
| 28 | 2.459 | 2.474 | 2.507 | 2.542 | 2.552 | 2.527 | 2.488 | 2.460 | 2.450 | 2.448 | 2.446 | 2.441 | 2.425 | 2.372 | 2.267 | 2.130 | 2.013 | |
| 29 | 2.117 | 2.129 | 2.155 | 2.180 | 2.183 | 2.158 | 2.122 | 2.096 | 2.086 | 2.084 | 2.084 | 2.083 | 2.071 | 2.028 | 1.937 | 1.816 | 1.712 | |
| 30 | 1.823 | 1.834 | 1.854 | 1.872 | 1.871 | 1.846 | 1.812 | 1.788 | 1.779 | 1.778 | 1.779 | 1.779 | 1.771 | 1.734 | 1.656 | 1.550 | 1.459 | |
| 31 | 1.572 | 1.582 | 1.597 | 1.609 | 1.605 | 1.581 | 1.551 | 1.529 | 1.520 | 1.520 | 1.521 | 1.522 | 1.514 | 1.483 | 1.416 | 1.325 | 1.247 | |
| 32 | 1.356 | 1.365 | 1.377 | 1.385 | 1.378 | 1.356 | 1.329 | 1.309 | 1.301 | 1.302 | 1.304 | 1.304 | 1.296 | 1.269 | 1.212 | 1.134 | 1.067 | |
| 33 | 1.171 | 1.179 | 1.189 | 1.193 | 1.185 | 1.165 | 1.141 | 1.123 | 1.116 | 1.117 | 1.119 | 1.118 | 1.110 | 1.085 | 1.037 | 0.972 | 0.914 | |
| 34 | 1.012 | 1.020 | 1.027 | 1.029 | 1.021 | 1.003 | 0.981 | 0.965 | 0.959 | 0.960 | 0.962 | 0.960 | 0.951 | 0.929 | 0.889 | 0.834 | 0.785 | |
| 35 | 8.761 | 8.832 | 8.890 | 8.890 | 8.807 | 8.646 | 8.453 | 8.303 | 8.247 | 8.265 | 8.286 | 8.257 | 8.157 | 7.959 | 7.616 | 7.156 | 6.742 | - 3 |
| 36 | 7.591 | 7.657 | 7.703 | 7.691 | 7.609 | 7.466 | 7.294 | 7.157 | 7.107 | 7.127 | 7.147 | 7.109 | 7.004 | 6.824 | 6.533 | 6.147 | 5.796 | |
| 37 | 6.586 | 6.648 | 6.684 | 6.663 | 6.585 | 6.458 | 6.305 | 6.180 | 6.134 | 6.157 | 6.175 | 6.131 | 6.022 | 5.857 | 5.610 | 5.283 | 4.985 | |
| 38 | 5.723 | 5.779 | 5.807 | 5.781 | 5.708 | 5.596 | 5.459 | 5.345 | 5.304 | 5.327 | 5.343 | 5.295 | 5.185 | 5.034 | 4.821 | 4.544 | 4.289 | |
| 39 | 4.980 | 5.032 | 5.054 | 5.025 | 4.957 | 4.857 | 4.736 | 4.632 | 4.595 | 4.618 | 4.632 | 4.581 | 4.473 | 4.333 | 4.148 | 3.911 | 3.691 | |
| 40 | 4.340 | 4.388 | 4.405 | 4.375 | 4.313 | 4.224 | 4.116 | 4.022 | 3.989 | 4.010 | 4.022 | 3.970 | 3.865 | 3.736 | 3.574 | 3.368 | 3.177 | |
| 41 | 3.789 | 3.832 | 3.846 | 3.816 | 3.759 | 3.680 | 3.583 | 3.499 | 3.469 | 3.489 | 3.499 | 3.448 | 3.347 | 3.227 | 3.083 | 2.903 | 2.735 | |
| 42 | 3.313 | 3.352 | 3.364 | 3.335 | 3.282 | 3.213 | 3.126 | 3.050 | 3.024 | 3.042 | 3.050 | 3.000 | 2.905 | 2.794 | 2.664 | 2.504 | 2.355 | |
| 43 | 2.902 | 2.937 | 2.947 | 2.920 | 2.872 | 2.809 | 2.732 | 2.665 | 2.641 | 2.658 | 2.664 | 2.617 | 2.527 | 2.424 | 2.305 | 2.161 | 2.029 | |
| 44 | 2.546 | 2.578 | 2.586 | 2.561 | 2.517 | 2.461 | 2.393 | 2.333 | 2.312 | 2.327 | 2.332 | 2.287 | 2.203 | 2.107 | 1.998 | 1.867 | 1.749 | |
| 45 | 2.237 | 2.266 | 2.274 | 2.251 | 2.211 | 2.160 | 2.099 | 2.046 | 2.029 | 2.042 | 2.046 | 2.004 | 1.926 | 1.836 | 1.734 | 1.615 | 1.509 | |
| 46 | 1.969 | 1.995 | 2.002 | 1.982 | 1.945 | 1.899 | 1.845 | 1.799 | 1.784 | 1.796 | 1.798 | 1.760 | 1.687 | 1.603 | 1.508 | 1.398 | 1.302 | |
| 47 | 1.735 | 1.759 | 1.766 | 1.748 | 1.714 | 1.672 | 1.624 | 1.584 | 1.572 | 1.583 | 1.584 | 1.548 | 1.482 | 1.403 | 1.313 | 1.213 | 1.125 | |
| 48 | 1.532 | 1.554 | 1.560 | 1.544 | 1.513 | 1.475 | 1.432 | 1.398 | 1.388 | 1.398 | 1.398 | 1.365 | 1.304 | 1.230 | 1.146 | 1.053 | 0.974 | |
| 49 | 1.354 | 1.374 | 1.380 | 1.366 | 1.338 | 1.302 | 1.264 | 1.236 | 1.228 | 1.237 | 1.236 | 1.206 | 1.149 | 1.080 | 1.001 | 0.915 | 0.844 | |
| 50 | 1.199 | 1.217 | 1.223 | 1.210 | 1.184 | 1.151 | 1.118 | 1.094 | 1.088 | 1.096 | 1.095 | 1.067 | 1.015 | 0.950 | 0.876 | 0.797 | 0.733 | |
| 51 | 1.062 | 1.078 | 1.085 | 1.073 | 1.049 | 1.019 | 0.989 | 0.969 | 0.966 | 0.973 | 0.971 | 0.945 | 0.897 | 0.837 | 0.768 | 0.695 | 0.637 | |
| 52 | 9.423 | 9.568 | 9.630 | 9.531 | 9.307 | 9.029 | 8.765 | 8.599 | 8.581 | 8.646 | 8.622 | 8.378 | 7.934 | 7.372 | 6.732 | 6.073 | 5.555 | - 4 |
| 53 | 8.366 | 8.497 | 8.556 | 8.468 | 8.261 | 8.004 | 7.770 | 7.634 | 7.630 | 7.690 | 7.661 | 7.433 | 7.022 | 6.499 | 5.909 | 5.314 | 4.852 | |
| 54 | 7.432 | 7.551 | 7.606 | 7.528 | 7.335 | 7.098 | 6.891 | 6.781 | 6.789 | 6.844 | 6.810 | 6.595 | 6.214 | 5.730 | 5.191 | 4.657 | 4.248 | |
| 55 | 6.607 | 6.713 | 6.765 | 6.693 | 6.514 | 6.296 | 6.113 | 6.025 | 6.041 | 6.092 | 6.055 | 5.851 | 5.496 | 5.051 | 4.562 | 4.087 | 3.728 | |
| 56 | 5.876 | 5.970 | 6.017 | 5.951 | 5.785 | 5.584 | 5.422 | 5.352 | 5.375 | 5.422 | 5.382 | 5.188 | 4.858 | 4.450 | 4.010 | 3.591 | 3.279 | |
| 57 | 5.227 | 5.311 | 5.351 | 5.289 | 5.135 | 4.951 | 4.808 | 4.753 | 4.781 | 4.823 | 4.781 | 4.596 | 4.289 | 3.917 | 3.525 | 3.159 | 2.890 | |
| 58 | 4.651 | 4.724 | 4.757 | 4.698 | 4.555 | 4.388 | 4.262 | 4.218 | 4.249 | 4.287 | 4.243 | 4.066 | 3.781 | 3.444 | 3.098 | 2.782 | 2.552 | |
| 59 | 4.138 | 4.201 | 4.227 | 4.169 | 4.037 | 3.886 | 3.775 | 3.741 | 3.772 | 3.807 | 3.761 | 3.592 | 3.328 | 3.024 | 2.722 | 2.452 | 2.257 | |
| 60 | 3.682 | 3.735 | 3.753 | 3.696 | 3.575 | 3.438 | 3.341 | 3.314 | 3.345 | 3.376 | 3.329 | 3.168 | 2.924 | 2.651 | 2.389 | 2.161 | 2.000 | |
| 61 | 3.275 | 3.319 | 3.330 | 3.273 | 3.160 | 3.039 | 2.954 | 2.933 | 2.963 | 2.989 | 2.942 | 2.789 | 2.563 | 2.321 | 2.096 | 1.906 | 1.773 | |
| 62 | 2.912 | 2.947 | 2.950 | 2.893 | 2.790 | 2.682 | 2.609 | 2.592 | 2.620 | 2.642 | 2.595 | 2.450 | 2.243 | 2.028 | 1.837 | 1.681 | 1.573 | |
| 63 | 2.588 | 2.615 | 2.611 | 2.553 | 2.459 | 2.364 | 2.301 | 2.287 | 2.312 | 2.331 | 2.284 | 2.148 | 1.959 | 1.769 | 1.608 | 1.481 | 1.396 | |
| 64 | 2.298 | 2.318 | 2.307 | 2.249 | 2.163 | 2.080 | 2.026 | 2.016 | 2.038 | 2.053 | 2.007 | 1.880 | 1.707 | 1.541 | 1.406 | 1.305 | 1.238 | |
| 65 | 2.039 | 2.052 | 2.036 | 1.978 | 1.898 | 1.826 | 1.782 | 1.773 | 1.793 | 1.804 | 1.759 | 1.642 | 1.486 | 1.340 | 1.228 | 1.148 | 1.097 | |
| 66 | 1.808 | 1.815 | 1.793 | 1.735 | 1.663 | 1.601 | 1.564 | 1.558 | 1.574 | 1.582 | 1.539 | 1.431 | 1.291 | 1.164 | 1.071 | 1.009 | 0.971 | |
| 67 | 1.601 | 1.603 | 1.576 | 1.519 | 1.453 | 1.401 | 1.371 | 1.366 | 1.380 | 1.385 | 1.344 | 1.246 | 1.120 | 1.009 | 0.933 | 0.885 | 0.858 | |
| 68 | 1.416 | 1.413 | 1.383 | 1.327 | 1.267 | 1.223 | 1.199 | 1.196 | 1.208 | 1.210 | 1.172 | 1.082 | 0.970 | 0.875 | 0.812 | 0.776 | 0.757 | |
| 69 | 1.250 | 1.244 | 1.211 | 1.157 | 1.103 | 1.066 | 1.047 | 1.046 | 1.055 | 1.055 | 1.020 | 0.939 | 0.840 | 0.757 | 0.706 | 0.678 | 0.665 | |
| 70 | 1.102 | 1.093 | 1.058 | 1.006 | 0.957 | 0.926 | 0.913 | 0.912 | 0.919 | 0.918 | 0.886 | 0.814 | 0.727 | 0.656 | 0.613 | 0.592 | 0.584 | |
| 71 | 9.689 | 9.575 | 9.227 | 8.725 | 8.287 | 8.033 | 7.939 | 7.945 | 8.000 | 7.977 | 7.680 | 7.046 | 6.284 | 5.670 | 5.313 | 5.159 | 5.106 | - 5 |
| 72 | 8.498 | 8.370 | 8.025 | 7.552 | 7.159 | 6.951 | 6.889 | 6.904 | 6.946 | 6.915 | 6.649 | 6.094 | 5.432 | 4.903 | 4.604 | 4.486 | 4.454 | |
| 73 | 7.431 | 7.297 | 6.961 | 6.520 | 6.170 | 6.000 | 5.963 | 5.984 | 6.016 | 5.982 | 5.747 | 5.266 | 4.693 | 4.238 | 3.986 | 3.893 | 3.875 | |
| 74 | 6.475 | 6.341 | 6.021 | 5.615 | 5.304 | 5.166 | 5.148 | 5.172 | 5.197 | 5.163 | 4.959 | 4.546 | 4.053 | 3.662 | 3.448 | 3.373 | 3.362 | |
| 75 | 5.620 | 5.490 | 5.193 | 4.823 | 4.550 | 4.437 | 4.432 | 4.457 | 4.476 | 4.444 | 4.271 | 3.919 | 3.498 | 3.163 | 2.980 | 2.918 | 2.911 | |
| 76 | 4.855 | 4.735 | 4.464 | 4.133 | 3.893 | 3.801 | 3.803 | 3.826 | 3.841 | 3.814 | 3.670 | 3.373 | 3.015 | 2.729 | 2.574 | 2.522 | 2.516 | |
| 77 | 4.174 | 4.066 | 3.823 | 3.531 | 3.323 | 3.247 | 3.252 | 3.271 | 3.282 | 3.262 | 3.145 | 2.898 | 2.595 | 2.352 | 2.220 | 2.177 | 2.172 | |
| 78 | 3.568 | 3.474 | 3.262 | 3.008 | 2.830 | 2.766 | 2.770 | 2.782 | 2.790 | 2.778 | 2.688 | 2.483 | 2.227 | 2.023 | 1.913 | 1.878 | 1.875 | |
| 79 | 3.031 | 2.952 | 2.772 | 2.554 | 2.403 | 2.350 | 2.349 | 2.354 | 2.359 | 2.355 | 2.288 | 2.120 | 1.905 | 1.735 | 1.647 | 1.621 | 1.619 | |
| 80 | 2.557 | 2.494 | 2.344 | 2.162 | 2.036 | 1.990 | 1.982 | 1.977 | 1.980 | 1.984 | 1.938 | 1.802 | 1.622 | 1.482 | 1.415 | 1.399 | 1.400 | |

39

| KM | LAT = -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.022 | 1.104 | 1.149 | 1.208 | 1.265 | 1.308 | 1.334 | 1.349 | 1.353 | 1.343 | 1.311 | 1.262 | 1.209 | 1.161 | 1.118 | 1.077 | 1.045 | - 1 |
| 19 | 0.930 | 0.952 | 0.989 | 1.035 | 1.078 | 1.108 | 1.124 | 1.132 | 1.136 | 1.131 | 1.109 | 1.073 | 1.032 | 0.995 | 0.961 | 0.928 | 0.902 | |
| 20 | 8.001 | 8.190 | 8.494 | 8.855 | 9.171 | 9.368 | 9.454 | 9.495 | 9.524 | 9.496 | 9.350 | 9.093 | 8.797 | 8.515 | 8.240 | 7.961 | 7.729 | - 2 |
| 21 | 6.876 | 7.033 | 7.282 | 7.567 | 7.799 | 7.920 | 7.954 | 7.967 | 7.985 | 7.971 | 7.873 | 7.698 | 7.493 | 7.286 | 7.060 | 6.812 | 6.600 | |
| 22 | 5.903 | 6.033 | 6.232 | 6.463 | 6.632 | 6.700 | 6.700 | 6.693 | 6.703 | 6.695 | 6.631 | 6.515 | 6.380 | 6.231 | 6.044 | 5.822 | 5.627 | |
| 23 | 5.063 | 5.172 | 5.341 | 5.520 | 5.641 | 5.674 | 5.653 | 5.635 | 5.637 | 5.632 | 5.590 | 5.517 | 5.432 | 5.326 | 5.171 | 4.973 | 4.796 | |
| 24 | 4.341 | 4.433 | 4.573 | 4.715 | 4.802 | 4.812 | 4.780 | 4.754 | 4.751 | 4.747 | 4.721 | 4.677 | 4.625 | 4.550 | 4.422 | 4.248 | 4.091 | |
| 25 | 3.720 | 3.799 | 3.915 | 4.028 | 4.091 | 4.082 | 4.050 | 4.021 | 4.014 | 4.011 | 3.995 | 3.970 | 3.939 | 3.885 | 3.780 | 3.630 | 3.493 | |
| 26 | 3.187 | 3.256 | 3.353 | 3.443 | 3.488 | 3.472 | 3.438 | 3.409 | 3.400 | 3.397 | 3.389 | 3.375 | 3.356 | 3.315 | 3.229 | 3.103 | 2.987 | |
| 27 | 2.730 | 2.791 | 2.872 | 2.944 | 2.976 | 2.962 | 2.925 | 2.896 | 2.886 | 2.884 | 2.880 | 2.873 | 2.860 | 2.828 | 2.758 | 2.653 | 2.556 | |
| 28 | 2.338 | 2.392 | 2.461 | 2.519 | 2.542 | 2.522 | 2.494 | 2.466 | 2.455 | 2.454 | 2.453 | 2.449 | 2.439 | 2.412 | 2.354 | 2.269 | 2.190 | |
| 29 | 2.002 | 2.050 | 2.109 | 2.156 | 2.173 | 2.159 | 2.129 | 2.104 | 2.093 | 2.092 | 2.093 | 2.090 | 2.080 | 2.057 | 2.009 | 1.941 | 1.878 | |
| 30 | 1.715 | 1.757 | 1.808 | 1.846 | 1.859 | 1.847 | 1.821 | 1.798 | 1.787 | 1.788 | 1.790 | 1.787 | 1.776 | 1.753 | 1.714 | 1.661 | 1.611 | |
| 31 | 1.469 | 1.507 | 1.550 | 1.582 | 1.592 | 1.582 | 1.560 | 1.539 | 1.529 | 1.530 | 1.532 | 1.529 | 1.517 | 1.495 | 1.463 | 1.421 | 1.382 | |
| 32 | 1.258 | 1.292 | 1.330 | 1.356 | 1.365 | 1.357 | 1.338 | 1.319 | 1.310 | 1.311 | 1.314 | 1.310 | 1.296 | 1.276 | 1.248 | 1.215 | 1.186 | |
| 33 | 1.078 | 1.108 | 1.141 | 1.163 | 1.171 | 1.165 | 1.149 | 1.133 | 1.124 | 1.126 | 1.129 | 1.124 | 1.109 | 1.089 | 1.066 | 1.040 | 1.017 | |
| 34 | 0.924 | 0.951 | 0.980 | 0.999 | 1.006 | 1.002 | 0.989 | 0.974 | 0.966 | 0.968 | 0.971 | 0.966 | 0.950 | 0.930 | 0.910 | 0.890 | 0.873 | |
| 35 | 7.922 | 8.168 | 8.422 | 8.589 | 8.654 | 8.624 | 8.515 | 8.384 | 8.317 | 8.335 | 8.364 | 8.305 | 8.150 | 7.959 | 7.780 | 7.616 | 7.485 | - 3 |
| 36 | 6.799 | 7.020 | 7.245 | 7.393 | 7.453 | 7.435 | 7.344 | 7.230 | 7.171 | 7.189 | 7.214 | 7.155 | 7.001 | 6.818 | 6.652 | 6.522 | 6.419 | |
| 37 | 5.841 | 6.038 | 6.239 | 6.371 | 6.429 | 6.419 | 6.344 | 6.245 | 6.193 | 6.211 | 6.233 | 6.173 | 6.024 | 5.850 | 5.704 | 5.589 | 5.505 | |
| 38 | 5.023 | 5.199 | 5.379 | 5.499 | 5.554 | 5.551 | 5.489 | 5.404 | 5.358 | 5.375 | 5.393 | 5.335 | 5.193 | 5.029 | 4.894 | 4.793 | 4.723 | |
| 39 | 4.324 | 4.483 | 4.645 | 4.754 | 4.806 | 4.808 | 4.758 | 4.685 | 4.645 | 4.660 | 4.675 | 4.619 | 4.486 | 4.333 | 4.207 | 4.116 | 4.053 | |
| 40 | 3.728 | 3.873 | 4.017 | 4.117 | 4.167 | 4.172 | 4.131 | 4.069 | 4.035 | 4.048 | 4.059 | 4.006 | 3.883 | 3.741 | 3.624 | 3.538 | 3.481 | |
| 41 | 3.219 | 3.348 | 3.481 | 3.573 | 3.620 | 3.627 | 3.594 | 3.542 | 3.513 | 3.524 | 3.532 | 3.482 | 3.369 | 3.238 | 3.128 | 3.047 | 2.993 | |
| 42 | 2.784 | 2.900 | 3.022 | 3.107 | 3.151 | 3.159 | 3.133 | 3.090 | 3.066 | 3.074 | 3.079 | 3.033 | 2.930 | 2.810 | 2.706 | 2.628 | 2.576 | |
| 43 | 2.412 | 2.517 | 2.629 | 2.707 | 2.748 | 2.757 | 2.736 | 2.701 | 2.681 | 2.688 | 2.691 | 2.648 | 2.555 | 2.445 | 2.347 | 2.271 | 2.221 | |
| 44 | 2.093 | 2.189 | 2.291 | 2.364 | 2.402 | 2.411 | 2.395 | 2.367 | 2.351 | 2.356 | 2.356 | 2.317 | 2.233 | 2.132 | 2.041 | 1.967 | 1.918 | |
| 45 | 1.820 | 1.907 | 2.002 | 2.069 | 2.104 | 2.113 | 2.101 | 2.079 | 2.066 | 2.070 | 2.067 | 2.031 | 1.957 | 1.865 | 1.779 | 1.708 | 1.660 | |
| 46 | 1.586 | 1.665 | 1.752 | 1.815 | 1.847 | 1.855 | 1.846 | 1.830 | 1.821 | 1.822 | 1.818 | 1.785 | 1.718 | 1.635 | 1.554 | 1.486 | 1.439 | |
| 47 | 1.384 | 1.457 | 1.537 | 1.596 | 1.625 | 1.632 | 1.626 | 1.614 | 1.608 | 1.608 | 1.602 | 1.571 | 1.512 | 1.437 | 1.361 | 1.296 | 1.251 | |
| 48 | 1.210 | 1.277 | 1.351 | 1.405 | 1.432 | 1.438 | 1.434 | 1.426 | 1.422 | 1.422 | 1.415 | 1.386 | 1.333 | 1.265 | 1.195 | 1.133 | 1.090 | |
| 49 | 1.060 | 1.121 | 1.190 | 1.240 | 1.264 | 1.270 | 1.267 | 1.263 | 1.261 | 1.260 | 1.252 | 1.225 | 1.178 | 1.116 | 1.051 | 0.993 | 0.952 | |
| 50 | 0.930 | 0.986 | 1.050 | 1.096 | 1.118 | 1.122 | 1.121 | 1.120 | 1.120 | 1.118 | 1.109 | 1.084 | 1.042 | 0.986 | 0.926 | 0.872 | 0.834 | |
| 51 | 8.174 | 8.685 | 9.273 | 9.703 | 9.897 | 9.935 | 9.931 | 9.941 | 9.956 | 9.938 | 9.835 | 9.602 | 9.223 | 8.723 | 8.172 | 7.668 | 7.315 | - 4 |
| 52 | 7.193 | 7.659 | 8.200 | 8.598 | 8.772 | 8.801 | 8.805 | 8.833 | 8.861 | 8.840 | 8.732 | 8.513 | 8.173 | 7.722 | 7.218 | 6.756 | 6.433 | |
| 53 | 6.337 | 6.760 | 7.258 | 7.625 | 7.780 | 7.802 | 7.810 | 7.852 | 7.890 | 7.868 | 7.757 | 7.552 | 7.245 | 6.839 | 6.381 | 5.959 | 5.667 | |
| 54 | 5.588 | 5.972 | 6.427 | 6.765 | 6.904 | 6.919 | 6.930 | 6.982 | 7.028 | 7.005 | 6.893 | 6.700 | 6.422 | 6.057 | 5.642 | 5.262 | 4.999 | |
| 55 | 4.931 | 5.277 | 5.692 | 6.002 | 6.127 | 6.136 | 6.149 | 6.207 | 6.258 | 6.236 | 6.125 | 5.943 | 5.692 | 5.363 | 4.989 | 4.648 | 4.416 | |
| 56 | 4.354 | 4.664 | 5.041 | 5.324 | 5.436 | 5.441 | 5.454 | 5.516 | 5.570 | 5.548 | 5.439 | 5.269 | 5.040 | 4.744 | 4.409 | 4.102 | 3.903 | |
| 57 | 3.846 | 4.122 | 4.462 | 4.720 | 4.821 | 4.822 | 4.835 | 4.898 | 4.954 | 4.932 | 4.827 | 4.667 | 4.460 | 4.193 | 3.894 | 3.627 | 3.451 | |
| 58 | 3.397 | 3.642 | 3.947 | 4.181 | 4.272 | 4.271 | 4.283 | 4.345 | 4.400 | 4.380 | 4.279 | 4.130 | 3.941 | 3.702 | 3.436 | 3.202 | 3.051 | |
| 59 | 3.000 | 3.216 | 3.487 | 3.698 | 3.780 | 3.778 | 3.790 | 3.849 | 3.903 | 3.884 | 3.788 | 3.649 | 3.477 | 3.263 | 3.027 | 2.824 | 2.696 | |
| 60 | 2.649 | 2.837 | 3.077 | 3.267 | 3.341 | 3.339 | 3.350 | 3.406 | 3.457 | 3.438 | 3.348 | 3.220 | 3.064 | 2.871 | 2.663 | 2.488 | 2.380 | |
| 61 | 2.338 | 2.501 | 2.712 | 2.881 | 2.948 | 2.947 | 2.957 | 3.009 | 3.056 | 3.039 | 2.955 | 2.837 | 2.694 | 2.522 | 2.339 | 2.189 | 2.098 | |
| 62 | 2.062 | 2.202 | 2.386 | 2.536 | 2.597 | 2.597 | 2.606 | 2.654 | 2.697 | 2.680 | 2.603 | 2.495 | 2.365 | 2.211 | 2.051 | 1.922 | 1.847 | |
| 63 | 1.811 | 1.936 | 2.095 | 2.227 | 2.283 | 2.285 | 2.294 | 2.337 | 2.375 | 2.360 | 2.289 | 2.190 | 2.073 | 1.935 | 1.795 | 1.685 | 1.623 | |
| 64 | 1.600 | 1.701 | 1.837 | 1.952 | 2.003 | 2.002 | 2.012 | 2.055 | 2.088 | 2.073 | 2.009 | 1.919 | 1.813 | 1.691 | 1.568 | 1.475 | 1.424 | |
| 65 | 1.407 | 1.492 | 1.607 | 1.707 | 1.754 | 1.760 | 1.771 | 1.804 | 1.832 | 1.818 | 1.760 | 1.679 | 1.584 | 1.475 | 1.368 | 1.288 | 1.246 | |
| 66 | 1.236 | 1.307 | 1.404 | 1.490 | 1.532 | 1.541 | 1.553 | 1.582 | 1.605 | 1.591 | 1.539 | 1.467 | 1.381 | 1.284 | 1.191 | 1.123 | 1.088 | |
| 67 | 1.084 | 1.143 | 1.224 | 1.299 | 1.336 | 1.347 | 1.359 | 1.385 | 1.404 | 1.390 | 1.344 | 1.279 | 1.203 | 1.117 | 1.036 | 0.978 | 0.948 | |
| 68 | 0.950 | 0.998 | 1.065 | 1.127 | 1.162 | 1.176 | 1.189 | 1.211 | 1.225 | 1.213 | 1.172 | 1.115 | 1.046 | 0.970 | 0.899 | 0.850 | 0.825 | |
| 69 | 0.831 | 0.871 | 0.926 | 0.977 | 1.009 | 1.024 | 1.038 | 1.057 | 1.068 | 1.056 | 1.021 | 0.970 | 0.909 | 0.841 | 0.780 | 0.737 | 0.716 | |
| 70 | 7.262 | 7.585 | 8.032 | 8.453 | 8.740 | 8.909 | 9.058 | 9.218 | 9.293 | 9.181 | 8.876 | 8.430 | 7.885 | 7.294 | 6.761 | 6.391 | 6.206 | - 5 |
| 71 | 6.333 | 6.598 | 6.956 | 7.300 | 7.557 | 7.732 | 7.891 | 8.026 | 8.073 | 7.970 | 7.708 | 7.320 | 6.838 | 6.318 | 5.855 | 5.534 | 5.370 | |
| 72 | 5.513 | 5.730 | 6.016 | 6.293 | 6.521 | 6.706 | 6.863 | 6.976 | 7.001 | 6.906 | 6.685 | 6.350 | 5.925 | 5.469 | 5.068 | 4.788 | 4.640 | |
| 73 | 4.789 | 4.968 | 5.194 | 5.415 | 5.616 | 5.802 | 5.957 | 6.051 | 6.058 | 5.973 | 5.790 | 5.503 | 5.131 | 4.732 | 4.384 | 4.139 | 4.004 | |
| 74 | 4.151 | 4.299 | 4.477 | 4.651 | 4.828 | 5.009 | 5.159 | 5.236 | 5.230 | 5.156 | 5.006 | 4.763 | 4.439 | 4.092 | 3.791 | 3.576 | 3.452 | |
| 75 | 3.588 | 3.712 | 3.852 | 3.988 | 4.142 | 4.314 | 4.456 | 4.517 | 4.501 | 4.439 | 4.320 | 4.117 | 3.836 | 3.537 | 3.277 | 3.087 | 2.973 | |
| 76 | 3.092 | 3.197 | 3.307 | 3.413 | 3.546 | 3.705 | 3.834 | 3.882 | 3.861 | 3.809 | 3.718 | 3.551 | 3.312 | 3.054 | 2.830 | 2.663 | 2.558 | |
| 77 | 2.656 | 2.745 | 2.833 | 2.916 | 3.028 | 3.172 | 3.286 | 3.320 | 3.297 | 3.257 | 3.191 | 3.056 | 2.854 | 2.634 | 2.442 | 2.295 | 2.198 | |
| 78 | 2.273 | 2.349 | 2.420 | 2.485 | 2.580 | 2.705 | 2.801 | 2.824 | 2.800 | 2.772 | 2.727 | 2.622 | 2.454 | 2.268 | 2.104 | 1.974 | 1.887 | |
| 79 | 1.936 | 2.001 | 2.060 | 2.113 | 2.192 | 2.296 | 2.373 | 2.386 | 2.363 | 2.346 | 2.319 | 2.241 | 2.104 | 1.948 | 1.808 | 1.695 | 1.616 | |
| 80 | 1.641 | 1.697 | 1.747 | 1.792 | 1.852 | 1.939 | 1.995 | 1.998 | 1.978 | 1.971 | 1.960 | 1.905 | 1.797 | 1.669 | 1.550 | 1.452 | 1.381 | |

APRIL                                                    ZONAL MEAN DENSITY (KG/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.079 | 1.088 | 1.119 | 1.175 | 1.237 | 1.288 | 1.321 | 1.342 | 1.349 | 1.337 | 1.306 | 1.263 | 1.217 | 1.177 | 1.148 | 1.134 | 1.131 | - 1 |
| 19 | 0.930 | 0.937 | 0.962 | 1.006 | 1.055 | 1.093 | 1.116 | 1.129 | 1.132 | 1.123 | 1.100 | 1.069 | 1.037 | 1.008 | 0.988 | 0.979 | 0.977 | |
| 20 | 7.984 | 8.052 | 8.263 | 8.616 | 8.989 | 9.259 | 9.405 | 9.476 | 9.489 | 9.420 | 9.262 | 9.049 | 8.827 | 8.632 | 8.492 | 8.425 | 8.416 | - 2 |
| 21 | 6.826 | 6.905 | 7.094 | 7.376 | 7.652 | 7.834 | 7.921 | 7.959 | 7.961 | 7.908 | 7.798 | 7.659 | 7.516 | 7.387 | 7.289 | 7.241 | 7.235 | |
| 22 | 5.818 | 5.911 | 6.086 | 6.314 | 6.514 | 6.630 | 6.676 | 6.693 | 6.688 | 6.648 | 6.575 | 6.487 | 6.400 | 6.317 | 6.251 | 6.217 | 6.215 | |
| 23 | 4.947 | 5.052 | 5.218 | 5.405 | 5.549 | 5.618 | 5.636 | 5.637 | 5.628 | 5.600 | 5.553 | 5.502 | 5.451 | 5.399 | 5.356 | 5.336 | 5.339 | |
| 24 | 4.198 | 4.312 | 4.471 | 4.627 | 4.730 | 4.768 | 4.768 | 4.758 | 4.747 | 4.728 | 4.700 | 4.672 | 4.643 | 4.611 | 4.586 | 4.578 | 4.586 | |
| 25 | 3.557 | 3.676 | 3.827 | 3.960 | 4.036 | 4.054 | 4.042 | 4.026 | 4.013 | 4.001 | 3.987 | 3.973 | 3.956 | 3.936 | 3.924 | 3.927 | 3.940 | |
| 26 | 3.010 | 3.130 | 3.273 | 3.388 | 3.446 | 3.453 | 3.435 | 3.414 | 3.400 | 3.393 | 3.390 | 3.383 | 3.371 | 3.359 | 3.356 | 3.367 | 3.385 | |
| 27 | 2.545 | 2.662 | 2.796 | 2.897 | 2.944 | 2.946 | 2.926 | 2.902 | 2.887 | 2.885 | 2.888 | 2.885 | 2.874 | 2.865 | 2.869 | 2.887 | 2.908 | |
| 28 | 2.150 | 2.262 | 2.382 | 2.472 | 2.516 | 2.517 | 2.497 | 2.472 | 2.457 | 2.458 | 2.464 | 2.463 | 2.452 | 2.444 | 2.452 | 2.474 | 2.497 | |
| 29 | 1.816 | 1.920 | 2.035 | 2.116 | 2.152 | 2.154 | 2.135 | 2.110 | 2.096 | 2.098 | 2.107 | 2.105 | 2.093 | 2.085 | 2.095 | 2.119 | 2.143 | |
| 30 | 1.534 | 1.629 | 1.734 | 1.808 | 1.841 | 1.845 | 1.828 | 1.805 | 1.791 | 1.794 | 1.804 | 1.802 | 1.787 | 1.779 | 1.790 | 1.815 | 1.838 | |
| 31 | 1.296 | 1.382 | 1.476 | 1.543 | 1.576 | 1.582 | 1.568 | 1.546 | 1.533 | 1.537 | 1.547 | 1.544 | 1.528 | 1.519 | 1.529 | 1.554 | 1.576 | |
| 32 | 1.095 | 1.171 | 1.256 | 1.318 | 1.349 | 1.358 | 1.347 | 1.327 | 1.315 | 1.319 | 1.328 | 1.324 | 1.308 | 1.298 | 1.307 | 1.330 | 1.350 | |
| 33 | 0.925 | 0.993 | 1.069 | 1.125 | 1.156 | 1.166 | 1.158 | 1.140 | 1.130 | 1.134 | 1.142 | 1.137 | 1.121 | 1.111 | 1.118 | 1.138 | 1.156 | |
| 34 | 0.783 | 0.842 | 0.909 | 0.961 | 0.991 | 1.002 | 0.997 | 0.982 | 0.972 | 0.976 | 0.982 | 0.977 | 0.962 | 0.951 | 0.957 | 0.974 | 0.990 | |
| 35 | 6.630 | 7.146 | 7.738 | 8.207 | 8.497 | 8.622 | 8.590 | 8.464 | 8.381 | 8.412 | 8.467 | 8.413 | 8.264 | 8.162 | 8.205 | 8.345 | 8.475 | - 3 |
| 36 | 5.622 | 6.068 | 6.590 | 7.016 | 7.293 | 7.424 | 7.411 | 7.308 | 7.238 | 7.263 | 7.306 | 7.253 | 7.114 | 7.016 | 7.041 | 7.152 | 7.257 | |
| 37 | 4.773 | 5.158 | 5.617 | 6.004 | 6.266 | 6.399 | 6.401 | 6.320 | 6.262 | 6.281 | 6.314 | 6.262 | 6.136 | 6.042 | 6.052 | 6.135 | 6.217 | |
| 38 | 4.059 | 4.390 | 4.793 | 5.144 | 5.390 | 5.522 | 5.536 | 5.475 | 5.427 | 5.442 | 5.465 | 5.416 | 5.303 | 5.214 | 5.211 | 5.269 | 5.330 | |
| 39 | 3.457 | 3.743 | 4.092 | 4.414 | 4.643 | 4.772 | 4.795 | 4.750 | 4.713 | 4.723 | 4.738 | 4.693 | 4.593 | 4.510 | 4.496 | 4.533 | 4.575 | |
| 40 | 2.951 | 3.196 | 3.507 | 3.794 | 4.006 | 4.129 | 4.160 | 4.129 | 4.100 | 4.107 | 4.115 | 4.074 | 3.987 | 3.911 | 3.887 | 3.906 | 3.932 | |
| 41 | 2.524 | 2.735 | 3.009 | 3.267 | 3.463 | 3.579 | 3.614 | 3.596 | 3.575 | 3.578 | 3.581 | 3.545 | 3.470 | 3.400 | 3.369 | 3.373 | 3.386 | |
| 42 | 2.163 | 2.346 | 2.587 | 2.819 | 2.999 | 3.108 | 3.146 | 3.138 | 3.123 | 3.124 | 3.123 | 3.090 | 3.026 | 2.963 | 2.927 | 2.919 | 2.922 | |
| 43 | 1.858 | 2.016 | 2.229 | 2.439 | 2.603 | 2.704 | 2.744 | 2.744 | 2.735 | 2.734 | 2.729 | 2.700 | 2.646 | 2.589 | 2.550 | 2.532 | 2.527 | |
| 44 | 1.599 | 1.737 | 1.925 | 2.114 | 2.264 | 2.358 | 2.398 | 2.404 | 2.399 | 2.397 | 2.390 | 2.365 | 2.319 | 2.267 | 2.227 | 2.203 | 2.191 | |
| 45 | 1.380 | 1.500 | 1.667 | 1.838 | 1.974 | 2.060 | 2.100 | 2.111 | 2.110 | 2.106 | 2.098 | 2.075 | 2.037 | 1.991 | 1.950 | 1.921 | 1.905 | |
| 46 | 1.194 | 1.299 | 1.448 | 1.601 | 1.725 | 1.804 | 1.843 | 1.857 | 1.859 | 1.855 | 1.845 | 1.825 | 1.793 | 1.752 | 1.711 | 1.680 | 1.661 | |
| 47 | 1.035 | 1.128 | 1.260 | 1.398 | 1.511 | 1.583 | 1.621 | 1.637 | 1.641 | 1.637 | 1.626 | 1.608 | 1.581 | 1.545 | 1.506 | 1.473 | 1.453 | |
| 48 | 0.900 | 0.981 | 1.099 | 1.224 | 1.326 | 1.392 | 1.428 | 1.446 | 1.451 | 1.447 | 1.436 | 1.420 | 1.392 | 1.365 | 1.328 | 1.295 | 1.274 | |
| 49 | 0.784 | 0.856 | 0.961 | 1.074 | 1.166 | 1.226 | 1.260 | 1.279 | 1.286 | 1.281 | 1.270 | 1.256 | 1.237 | 1.208 | 1.173 | 1.141 | 1.120 | |
| 50 | 0.685 | 0.748 | 0.842 | 0.944 | 1.028 | 1.082 | 1.114 | 1.133 | 1.141 | 1.136 | 1.125 | 1.112 | 1.096 | 1.071 | 1.038 | 1.007 | 0.987 | |
| 51 | 0.599 | 0.655 | 0.739 | 0.831 | 0.907 | 0.957 | 0.987 | 1.005 | 1.013 | 1.008 | 0.997 | 0.986 | 0.972 | 0.950 | 0.920 | 0.891 | 0.871 | |
| 52 | 5.249 | 5.743 | 6.494 | 7.325 | 8.015 | 8.466 | 8.744 | 8.927 | 9.005 | 8.960 | 8.849 | 8.744 | 8.632 | 8.441 | 8.165 | 7.890 | 7.706 | - 4 |
| 53 | 4.608 | 5.044 | 5.714 | 6.463 | 7.090 | 7.500 | 7.757 | 7.933 | 8.010 | 7.965 | 7.857 | 7.761 | 7.666 | 7.500 | 7.249 | 6.996 | 6.825 | |
| 54 | 4.052 | 4.435 | 5.031 | 5.707 | 6.275 | 6.648 | 6.885 | 7.051 | 7.126 | 7.082 | 6.977 | 6.890 | 6.809 | 6.664 | 6.438 | 6.206 | 6.051 | |
| 55 | 3.567 | 3.903 | 4.432 | 5.041 | 5.556 | 5.894 | 6.112 | 6.268 | 6.339 | 6.296 | 6.195 | 6.115 | 6.047 | 5.921 | 5.717 | 5.507 | 5.366 | |
| 56 | 3.143 | 3.436 | 3.905 | 4.452 | 4.919 | 5.226 | 5.424 | 5.570 | 5.637 | 5.594 | 5.497 | 5.424 | 5.368 | 5.258 | 5.075 | 4.885 | 4.759 | |
| 57 | 2.771 | 3.025 | 3.440 | 3.930 | 4.353 | 4.631 | 4.812 | 4.947 | 5.009 | 4.967 | 4.875 | 4.808 | 4.761 | 4.666 | 4.502 | 4.331 | 4.219 | |
| 58 | 2.445 | 2.664 | 3.028 | 3.467 | 3.849 | 4.101 | 4.266 | 4.390 | 4.447 | 4.405 | 4.318 | 4.258 | 4.219 | 4.137 | 3.990 | 3.836 | 3.736 | |
| 59 | 2.157 | 2.345 | 2.664 | 3.055 | 3.400 | 3.628 | 3.772 | 3.891 | 3.942 | 3.902 | 3.820 | 3.766 | 3.734 | 3.663 | 3.531 | 3.393 | 3.306 | |
| 60 | 1.903 | 2.063 | 2.341 | 2.689 | 2.999 | 3.205 | 3.341 | 3.444 | 3.490 | 3.451 | 3.374 | 3.326 | 3.301 | 3.239 | 3.121 | 2.998 | 2.920 | |
| 61 | 1.679 | 1.814 | 2.055 | 2.363 | 2.641 | 2.828 | 2.950 | 3.044 | 3.084 | 3.047 | 2.976 | 2.934 | 2.914 | 2.860 | 2.754 | 2.644 | 2.575 | |
| 62 | 1.480 | 1.594 | 1.802 | 2.073 | 2.322 | 2.491 | 2.601 | 2.686 | 2.721 | 2.685 | 2.621 | 2.584 | 2.568 | 2.521 | 2.426 | 2.328 | 2.267 | |
| 63 | 1.304 | 1.399 | 1.578 | 1.816 | 2.038 | 2.190 | 2.290 | 2.365 | 2.395 | 2.362 | 2.304 | 2.272 | 2.259 | 2.218 | 2.134 | 2.046 | 1.993 | |
| 64 | 1.148 | 1.226 | 1.379 | 1.588 | 1.786 | 1.923 | 2.012 | 2.079 | 2.104 | 2.074 | 2.022 | 1.995 | 1.985 | 1.949 | 1.873 | 1.795 | 1.748 | |
| 65 | 1.010 | 1.074 | 1.204 | 1.386 | 1.562 | 1.685 | 1.765 | 1.823 | 1.845 | 1.817 | 1.772 | 1.749 | 1.741 | 1.709 | 1.642 | 1.572 | 1.531 | |
| 66 | 0.887 | 0.939 | 1.050 | 1.208 | 1.363 | 1.474 | 1.546 | 1.596 | 1.614 | 1.589 | 1.550 | 1.531 | 1.525 | 1.497 | 1.437 | 1.375 | 1.338 | |
| 67 | 0.778 | 0.821 | 0.915 | 1.051 | 1.187 | 1.287 | 1.351 | 1.395 | 1.409 | 1.387 | 1.355 | 1.339 | 1.334 | 1.308 | 1.255 | 1.201 | 1.169 | |
| 68 | 0.682 | 0.717 | 0.796 | 0.913 | 1.033 | 1.122 | 1.179 | 1.216 | 1.227 | 1.209 | 1.182 | 1.169 | 1.165 | 1.142 | 1.095 | 1.048 | 1.019 | |
| 69 | 0.597 | 0.625 | 0.692 | 0.792 | 0.897 | 0.977 | 1.028 | 1.058 | 1.066 | 1.051 | 1.030 | 1.020 | 1.015 | 0.995 | 0.955 | 0.913 | 0.888 | |
| 70 | 5.214 | 5.450 | 6.004 | 6.858 | 7.775 | 8.489 | 8.939 | 9.186 | 9.241 | 9.123 | 8.964 | 8.889 | 8.843 | 8.660 | 8.311 | 7.954 | 7.734 | - 5 |
| 71 | 4.549 | 4.745 | 5.209 | 5.933 | 6.731 | 7.367 | 7.763 | 7.960 | 7.993 | 7.903 | 7.791 | 7.737 | 7.691 | 7.526 | 7.228 | 6.924 | 6.731 | |
| 72 | 3.963 | 4.128 | 4.515 | 5.128 | 5.818 | 6.384 | 6.729 | 6.881 | 6.896 | 6.832 | 6.761 | 6.726 | 6.680 | 6.532 | 6.280 | 6.023 | 5.855 | |
| 73 | 3.448 | 3.587 | 3.911 | 4.426 | 5.022 | 5.522 | 5.821 | 5.934 | 5.935 | 5.893 | 5.858 | 5.839 | 5.793 | 5.662 | 5.452 | 5.237 | 5.090 | |
| 74 | 2.994 | 3.114 | 3.384 | 3.816 | 4.327 | 4.768 | 5.025 | 5.105 | 5.093 | 5.071 | 5.065 | 5.061 | 5.016 | 4.902 | 4.729 | 4.550 | 4.423 | |
| 75 | 2.596 | 2.700 | 2.925 | 3.285 | 3.722 | 4.107 | 4.326 | 4.378 | 4.358 | 4.350 | 4.369 | 4.376 | 4.336 | 4.237 | 4.096 | 3.950 | 3.839 | |
| 76 | 2.247 | 2.337 | 2.524 | 2.824 | 3.196 | 3.529 | 3.712 | 3.742 | 3.716 | 3.720 | 3.756 | 3.775 | 3.740 | 3.657 | 3.544 | 3.424 | 3.327 | |
| 77 | 1.942 | 2.019 | 2.174 | 2.423 | 2.736 | 3.022 | 3.174 | 3.186 | 3.157 | 3.169 | 3.216 | 3.245 | 3.219 | 3.151 | 3.060 | 2.962 | 2.877 | |
| 78 | 1.674 | 1.740 | 1.868 | 2.073 | 2.336 | 2.577 | 2.701 | 2.701 | 2.671 | 2.686 | 2.741 | 2.777 | 2.762 | 2.709 | 2.637 | 2.554 | 2.480 | |
| 79 | 1.441 | 1.495 | 1.600 | 1.769 | 1.987 | 2.187 | 2.285 | 2.278 | 2.248 | 2.265 | 2.322 | 2.365 | 2.362 | 2.324 | 2.266 | 2.195 | 2.129 | |
| 80 | 1.236 | 1.279 | 1.364 | 1.503 | 1.682 | 1.845 | 1.921 | 1.908 | 1.880 | 1.896 | 1.952 | 2.002 | 2.012 | 1.988 | 1.940 | 1.877 | 1.817 | |

41

ZONAL MEAN DENSITY (KG/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.085 | 1.100 | 1.122 | 1.156 | 1.208 | 1.268 | 1.316 | 1.340 | 1.345 | 1.340 | 1.322 | 1.287 | 1.242 | 1.203 | 1.180 | 1.168 | 1.161 | - 1 |
| 19 | 0.937 | 0.948 | 0.964 | 0.991 | 1.031 | 1.077 | 1.111 | 1.126 | 1.128 | 1.123 | 1.110 | 1.086 | 1.055 | 1.030 | 1.015 | 1.008 | 1.004 | |
| 20 | 7.984 | 8.112 | 8.272 | 8.489 | 8.794 | 9.125 | 9.365 | 9.460 | 9.459 | 9.419 | 9.331 | 9.166 | 8.964 | 8.806 | 8.725 | 8.685 | 8.652 | - 2 |
| 21 | 6.741 | 6.906 | 7.087 | 7.276 | 7.499 | 7.730 | 7.894 | 7.953 | 7.943 | 7.911 | 7.854 | 7.750 | 7.624 | 7.530 | 7.488 | 7.468 | 7.446 | |
| 22 | 5.652 | 5.853 | 6.063 | 6.237 | 6.397 | 6.551 | 6.659 | 6.694 | 6.681 | 6.657 | 6.624 | 6.563 | 6.489 | 6.438 | 6.420 | 6.413 | 6.399 | |
| 23 | 4.718 | 4.944 | 5.177 | 5.344 | 5.462 | 5.560 | 5.626 | 5.644 | 5.630 | 5.615 | 5.599 | 5.568 | 5.528 | 5.502 | 5.500 | 5.502 | 5.495 | |
| 24 | 3.926 | 4.165 | 4.413 | 4.577 | 4.667 | 4.725 | 4.762 | 4.768 | 4.755 | 4.746 | 4.744 | 4.733 | 4.713 | 4.703 | 4.709 | 4.717 | 4.717 | |
| 25 | 3.262 | 3.502 | 3.754 | 3.917 | 3.990 | 4.023 | 4.039 | 4.036 | 4.024 | 4.022 | 4.028 | 4.029 | 4.021 | 4.019 | 4.029 | 4.042 | 4.047 | |
| 26 | 2.708 | 2.939 | 3.188 | 3.349 | 3.413 | 3.430 | 3.433 | 3.424 | 3.414 | 3.416 | 3.428 | 3.435 | 3.433 | 3.435 | 3.447 | 3.463 | 3.472 | |
| 27 | 2.249 | 2.465 | 2.703 | 2.860 | 2.920 | 2.929 | 2.923 | 2.911 | 2.902 | 2.908 | 2.923 | 2.933 | 2.934 | 2.936 | 2.949 | 2.966 | 2.978 | |
| 28 | 1.869 | 2.066 | 2.288 | 2.440 | 2.499 | 2.505 | 2.494 | 2.480 | 2.473 | 2.480 | 2.497 | 2.508 | 2.509 | 2.510 | 2.523 | 2.541 | 2.555 | |
| 29 | 1.555 | 1.731 | 1.935 | 2.079 | 2.138 | 2.144 | 2.132 | 2.117 | 2.111 | 2.120 | 2.136 | 2.147 | 2.147 | 2.147 | 2.159 | 2.177 | 2.193 | |
| 30 | 1.296 | 1.451 | 1.634 | 1.769 | 1.829 | 1.832 | 1.825 | 1.811 | 1.806 | 1.815 | 1.830 | 1.839 | 1.838 | 1.838 | 1.848 | 1.866 | 1.882 | |
| 31 | 1.083 | 1.217 | 1.379 | 1.504 | 1.564 | 1.575 | 1.565 | 1.552 | 1.548 | 1.557 | 1.570 | 1.578 | 1.576 | 1.574 | 1.583 | 1.600 | 1.616 | |
| 32 | 0.906 | 1.021 | 1.164 | 1.278 | 1.337 | 1.351 | 1.343 | 1.332 | 1.329 | 1.337 | 1.349 | 1.355 | 1.352 | 1.350 | 1.358 | 1.374 | 1.389 | |
| 33 | 0.760 | 0.858 | 0.982 | 1.086 | 1.143 | 1.160 | 1.155 | 1.146 | 1.143 | 1.150 | 1.160 | 1.164 | 1.161 | 1.159 | 1.165 | 1.180 | 1.194 | |
| 34 | 0.639 | 0.722 | 0.829 | 0.922 | 0.977 | 0.996 | 0.994 | 0.987 | 0.985 | 0.991 | 0.999 | 1.002 | 0.998 | 0.996 | 1.002 | 1.015 | 1.027 | |
| 35 | 5.391 | 6.082 | 6.996 | 7.828 | 8.357 | 8.562 | 8.568 | 8.516 | 8.503 | 8.552 | 8.615 | 8.631 | 8.595 | 8.573 | 8.621 | 8.735 | 8.850 | - 3 |
| 36 | 4.557 | 5.134 | 5.913 | 6.650 | 7.148 | 7.365 | 7.394 | 7.359 | 7.351 | 7.390 | 7.438 | 7.445 | 7.412 | 7.391 | 7.433 | 7.531 | 7.632 | |
| 37 | 3.861 | 4.342 | 5.004 | 5.654 | 6.118 | 6.340 | 6.389 | 6.370 | 6.365 | 6.395 | 6.430 | 6.432 | 6.403 | 6.385 | 6.419 | 6.503 | 6.590 | |
| 38 | 3.281 | 3.680 | 4.241 | 4.812 | 5.241 | 5.464 | 5.528 | 5.522 | 5.520 | 5.543 | 5.567 | 5.566 | 5.540 | 5.526 | 5.555 | 5.625 | 5.699 | |
| 39 | 2.795 | 3.125 | 3.601 | 4.101 | 4.495 | 4.715 | 4.789 | 4.795 | 4.796 | 4.812 | 4.828 | 4.824 | 4.804 | 4.792 | 4.817 | 4.875 | 4.937 | |
| 40 | 2.387 | 2.661 | 3.063 | 3.501 | 3.860 | 4.074 | 4.156 | 4.171 | 4.173 | 4.184 | 4.194 | 4.190 | 4.173 | 4.166 | 4.186 | 4.233 | 4.284 | |
| 41 | 2.044 | 2.271 | 2.612 | 2.994 | 3.321 | 3.525 | 3.612 | 3.633 | 3.638 | 3.644 | 3.650 | 3.646 | 3.634 | 3.629 | 3.646 | 3.684 | 3.724 | |
| 42 | 1.754 | 1.943 | 2.232 | 2.566 | 2.862 | 3.056 | 3.145 | 3.170 | 3.176 | 3.180 | 3.182 | 3.179 | 3.171 | 3.169 | 3.182 | 3.212 | 3.245 | |
| 43 | 1.510 | 1.667 | 1.913 | 2.205 | 2.472 | 2.654 | 2.742 | 2.771 | .778 | 2.780 | 2.780 | 2.778 | 2.773 | 2.773 | 2.785 | 2.808 | 2.833 | |
| 44 | 1.302 | 1.434 | 1.643 | 1.899 | 2.139 | 2.310 | 2.396 | 2.426 | 2.433 | 2.434 | 2.434 | 2.432 | 2.431 | 2.433 | 2.442 | 2.460 | 2.478 | |
| 45 | 1.126 | 1.236 | 1.416 | 1.639 | 1.856 | 2.014 | 2.097 | 2.128 | 2.135 | 2.136 | 2.135 | 2.135 | 2.136 | 2.139 | 2.147 | 2.160 | 2.173 | |
| 46 | 0.976 | 1.069 | 1.223 | 1.419 | 1.614 | 1.760 | 1.839 | 1.869 | 1.877 | 1.877 | 1.876 | 1.877 | 1.880 | 1.885 | 1.891 | 1.900 | 1.910 | |
| 47 | 0.848 | 0.927 | 1.059 | 1.232 | 1.407 | 1.541 | 1.616 | 1.645 | 1.652 | 1.652 | 1.652 | 1.654 | 1.659 | 1.664 | 1.670 | 1.676 | 1.682 | |
| 48 | 0.739 | 0.805 | 0.920 | 1.072 | 1.229 | 1.352 | 1.422 | 1.450 | 1.457 | 1.457 | 1.457 | 1.460 | 1.466 | 1.472 | 1.477 | 1.481 | 1.485 | |
| 49 | 0.645 | 0.701 | 0.800 | 0.934 | 1.076 | 1.188 | 1.253 | 1.280 | 1.286 | 1.286 | 1.287 | 1.291 | 1.298 | 1.305 | 1.309 | 1.311 | 1.313 | |
| 50 | 0.564 | 0.612 | 0.698 | 0.817 | 0.944 | 1.046 | 1.106 | 1.131 | 1.137 | 1.137 | 1.139 | 1.144 | 1.151 | 1.158 | 1.161 | 1.163 | 1.163 | |
| 51 | 0.494 | 0.535 | 0.610 | 0.715 | 0.829 | 0.923 | 0.978 | 1.001 | 1.006 | 1.007 | 1.009 | 1.014 | 1.022 | 1.029 | 1.032 | 1.033 | 1.032 | |
| 52 | 4.332 | 4.691 | 5.346 | 6.272 | 7.296 | 8.147 | 8.658 | 8.868 | 8.917 | 8.921 | 8.942 | 9.000 | 9.081 | 9.149 | 9.180 | 9.182 | 9.176 | - 4 |
| 53 | 3.807 | 4.118 | 4.689 | 5.508 | 6.425 | 7.200 | 7.670 | 7.863 | 7.907 | 7.910 | 7.932 | 7.992 | 8.074 | 8.141 | 8.172 | 8.173 | 8.164 | |
| 54 | 3.351 | 3.619 | 4.119 | 4.842 | 5.663 | 6.366 | 6.800 | 6.978 | 7.015 | 7.016 | 7.039 | 7.100 | 7.181 | 7.247 | 7.278 | 7.279 | 7.271 | |
| 55 | 2.952 | 3.185 | 3.622 | 4.260 | 4.993 | 5.631 | 6.030 | 6.194 | 6.226 | 6.224 | 6.246 | 6.307 | 6.386 | 6.452 | 6.483 | 6.486 | 6.479 | |
| 56 | 2.603 | 2.805 | 3.187 | 3.748 | 4.402 | 4.981 | 5.349 | 5.500 | 5.526 | 5.521 | 5.541 | 5.600 | 5.678 | 5.742 | 5.774 | 5.780 | 5.776 | |
| 57 | 2.297 | 2.472 | 2.805 | 3.299 | 3.880 | 4.404 | 4.743 | 4.883 | 4.904 | 4.895 | 4.914 | 4.970 | 5.045 | 5.108 | 5.141 | 5.150 | 5.149 | |
| 58 | 2.027 | 2.180 | 2.470 | 2.902 | 3.418 | 3.891 | 4.204 | 4.334 | 4.350 | 4.338 | 4.354 | 4.408 | 4.480 | 4.540 | 4.574 | 4.586 | 4.590 | |
| 59 | 1.790 | 1.923 | 2.175 | 2.552 | 3.008 | 3.435 | 3.724 | 3.845 | 3.856 | 3.841 | 3.854 | 3.905 | 3.973 | 4.031 | 4.066 | 4.082 | 4.089 | |
| 60 | 1.580 | 1.696 | 1.914 | 2.243 | 2.645 | 3.029 | 3.295 | 3.407 | 3.415 | 3.397 | 3.407 | 3.455 | 3.520 | 3.575 | 3.610 | 3.629 | 3.640 | |
| 61 | 1.394 | 1.495 | 1.685 | 1.970 | 2.323 | 2.667 | 2.911 | 3.015 | 3.020 | 3.000 | 3.008 | 3.053 | 3.114 | 3.167 | 3.202 | 3.224 | 3.237 | |
| 62 | 1.229 | 1.318 | 1.481 | 1.728 | 2.037 | 2.346 | 2.569 | 2.665 | 2.667 | 2.646 | 2.652 | 2.693 | 2.750 | 2.800 | 2.836 | 2.860 | 2.876 | |
| 63 | 1.083 | 1.160 | 1.302 | 1.515 | 1.785 | 2.060 | 2.263 | 2.351 | 2.351 | 2.330 | 2.335 | 2.373 | 2.425 | 2.472 | 2.507 | 2.533 | 2.552 | |
| 64 | 0.953 | 1.021 | 1.143 | 1.326 | 1.561 | 1.805 | 1.990 | 2.070 | 2.069 | 2.048 | 2.052 | 2.087 | 2.135 | 2.179 | 2.213 | 2.241 | 2.261 | |
| 65 | 0.838 | 0.898 | 1.003 | 1.160 | 1.364 | 1.580 | 1.747 | 1.819 | 1.816 | 1.796 | 1.801 | 1.833 | 1.877 | 1.917 | 1.951 | 1.979 | 2.000 | |
| 66 | 0.736 | 0.789 | 0.880 | 1.014 | 1.190 | 1.381 | 1.530 | 1.594 | 1.590 | 1.573 | 1.578 | 1.607 | 1.646 | 1.683 | 1.716 | 1.745 | 1.767 | |
| 67 | 0.645 | 0.692 | 0.771 | 0.886 | 1.038 | 1.205 | 1.337 | 1.393 | 1.389 | 1.374 | 1.380 | 1.407 | 1.442 | 1.475 | 1.507 | 1.536 | 1.558 | |
| 68 | 0.565 | 0.606 | 0.674 | 0.773 | 0.904 | 1.050 | 1.165 | 1.214 | 1.210 | 1.198 | 1.205 | 1.230 | 1.260 | 1.291 | 1.321 | 1.350 | 1.372 | |
| 69 | 0.493 | 0.531 | 0.590 | 0.674 | 0.787 | 0.913 | 1.014 | 1.055 | 1.051 | 1.042 | 1.050 | 1.073 | 1.100 | 1.127 | 1.156 | 1.185 | 1.206 | |
| 70 | 0.430 | 0.464 | 0.515 | 0.587 | 0.684 | 0.793 | 0.880 | 0.914 | 0.910 | 0.904 | 0.914 | 0.935 | 0.958 | 0.982 | 1.010 | 1.038 | 1.059 | |
| 71 | 3.748 | 4.048 | 4.499 | 5.117 | 5.944 | 6.882 | 7.614 | 7.893 | 7.859 | 7.827 | 7.940 | 8.134 | 8.328 | 8.539 | 8.804 | 9.078 | 9.275 | - 5 |
| 72 | 3.259 | 3.529 | 3.923 | 4.454 | 5.161 | 5.960 | 6.572 | 6.793 | 6.762 | 6.758 | 6.883 | 7.061 | 7.225 | 7.411 | 7.663 | 7.926 | 8.111 | |
| 73 | 2.830 | 3.072 | 3.418 | 3.873 | 4.476 | 5.152 | 5.658 | 5.826 | 5.798 | 5.818 | 5.953 | 6.117 | 6.254 | 6.419 | 6.657 | 6.909 | 7.081 | |
| 74 | 2.454 | 2.671 | 2.974 | 3.365 | 3.877 | 4.445 | 4.856 | 4.979 | 4.955 | 4.994 | 5.135 | 5.286 | 5.400 | 5.547 | 5.772 | 6.012 | 6.169 | |
| 75 | 2.126 | 2.319 | 2.584 | 2.918 | 3.352 | 3.825 | 4.155 | 4.240 | 4.219 | 4.272 | 4.417 | 4.554 | 4.650 | 4.782 | 4.995 | 5.220 | 5.362 | |
| 76 | 1.840 | 2.011 | 2.241 | 2.526 | 2.891 | 3.282 | 3.543 | 3.598 | 3.580 | 3.642 | 3.785 | 3.910 | 3.992 | 4.112 | 4.313 | 4.523 | 4.650 | |
| 77 | 1.591 | 1.741 | 1.940 | 2.180 | 2.485 | 2.806 | 3.009 | 3.041 | 3.026 | 3.093 | 3.230 | 3.344 | 3.415 | 3.526 | 3.715 | 3.909 | 4.020 | |
| 78 | 1.375 | 1.506 | 1.674 | 1.875 | 2.127 | 2.389 | 2.546 | 2.561 | 2.547 | 2.615 | 2.743 | 2.846 | 2.910 | 3.014 | 3.191 | 3.368 | 3.464 | |
| 79 | 1.189 | 1.300 | 1.440 | 1.605 | 1.811 | 2.023 | 2.144 | 2.148 | 2.136 | 2.199 | 2.317 | 2.408 | 2.468 | 2.568 | 2.733 | 2.892 | 2.974 | |
| 80 | 1.028 | 1.120 | 1.234 | 1.365 | 1.531 | 1.701 | 1.796 | 1.794 | 1.783 | 1.840 | 1.943 | 2.025 | 2.083 | 2.179 | 2.332 | 2.474 | 2.541 | |

ZONAL MEAN DENSITY (KG/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.088 | 1.114 | 1.135 | 1.155 | 1.192 | 1.250 | 1.306 | 1.335 | 1.338 | 1.333 | 1.325 | 1.305 | 1.269 | 1.229 | 1.200 | 1.184 | 1.179 | - 1 |
| 19 | 0.941 | 0.960 | 0.975 | 0.989 | 1.018 | 1.063 | 1.104 | 1.123 | 1.122 | 1.116 | 1.110 | 1.097 | 1.075 | 1.050 | 1.031 | 1.022 | 1.017 | |
| 20 | 7.965 | 8.174 | 8.344 | 8.474 | 8.692 | 9.023 | 9.320 | 9.445 | 9.418 | 9.358 | 9.315 | 9.244 | 9.115 | 8.968 | 8.861 | 8.802 | 8.772 | - 2 |
| 21 | 6.646 | 6.898 | 7.118 | 7.260 | 7.424 | 7.659 | 7.871 | 7.954 | 7.922 | 7.869 | 7.843 | 7.812 | 7.745 | 7.666 | 7.609 | 7.578 | 7.559 | |
| 22 | 5.490 | 5.780 | 6.052 | 6.218 | 6.347 | 6.508 | 6.653 | 6.707 | 6.676 | 6.635 | 6.623 | 6.618 | 6.593 | 6.556 | 6.531 | 6.519 | 6.511 | |
| 23 | 4.506 | 4.817 | 5.129 | 5.322 | 5.432 | 5.538 | 5.632 | 5.664 | 5.639 | 5.609 | 5.608 | 5.620 | 5.619 | 5.609 | 5.603 | 5.604 | 5.605 | |
| 24 | 3.684 | 3.999 | 4.334 | 4.551 | 4.654 | 4.721 | 4.775 | 4.792 | 4.773 | 4.754 | 4.761 | 4.782 | 4.796 | 4.800 | 4.806 | 4.816 | 4.825 | |
| 25 | 3.006 | 3.311 | 3.653 | 3.886 | 3.989 | 4.030 | 4.056 | 4.062 | 4.049 | 4.039 | 4.051 | 4.076 | 4.098 | 4.110 | 4.121 | 4.137 | 4.152 | |
| 26 | 2.454 | 2.738 | 3.072 | 3.315 | 3.420 | 3.446 | 3.452 | 3.450 | 3.442 | 3.439 | 3.453 | 3.480 | 3.505 | 3.520 | 3.534 | 3.553 | 3.573 | |
| 27 | 2.005 | 2.263 | 2.579 | 2.822 | 2.931 | 2.950 | 2.942 | 2.936 | 2.932 | 2.934 | 2.950 | 2.976 | 3.000 | 3.016 | 3.031 | 3.052 | 3.075 | |
| 28 | 1.642 | 1.871 | 2.163 | 2.400 | 2.512 | 2.527 | 2.513 | 2.503 | 2.502 | 2.508 | 2.523 | 2.547 | 2.570 | 2.586 | 2.600 | 2.621 | 2.646 | |
| 29 | 1.349 | 1.548 | 1.812 | 2.037 | 2.150 | 2.166 | 2.149 | 2.138 | 2.139 | 2.147 | 2.162 | 2.183 | 2.204 | 2.218 | 2.231 | 2.253 | 2.278 | |
| 30 | 1.112 | 1.284 | 1.518 | 1.727 | 1.839 | 1.858 | 1.840 | 1.829 | 1.832 | 1.841 | 1.854 | 1.873 | 1.891 | 1.904 | 1.917 | 1.937 | 1.963 | |
| 31 | 0.920 | 1.066 | 1.272 | 1.463 | 1.572 | 1.593 | 1.578 | 1.568 | 1.571 | 1.580 | 1.592 | 1.608 | 1.624 | 1.636 | 1.647 | 1.667 | 1.691 | |
| 32 | 0.764 | 0.888 | 1.066 | 1.238 | 1.342 | 1.367 | 1.355 | 1.346 | 1.350 | 1.358 | 1.369 | 1.382 | 1.396 | 1.407 | 1.418 | 1.436 | 1.459 | |
| 33 | 0.637 | 0.741 | 0.894 | 1.047 | 1.145 | 1.172 | 1.164 | 1.157 | 1.161 | 1.169 | 1.178 | 1.189 | 1.201 | 1.211 | 1.221 | 1.238 | 1.259 | |
| 34 | 0.534 | 0.621 | 0.751 | 0.885 | 0.976 | 1.006 | 1.002 | 0.997 | 1.000 | 1.007 | 1.015 | 1.024 | 1.035 | 1.044 | 1.053 | 1.069 | 1.088 | |
| 35 | 4.487 | 5.216 | 6.317 | 7.485 | 8.313 | 8.630 | 8.630 | 8.596 | 8.627 | 8.687 | 8.751 | 8.832 | 8.923 | 9.007 | 9.101 | 9.246 | 9.412 | - 3 |
| 36 | 3.788 | 4.396 | 5.325 | 6.333 | 7.083 | 7.407 | 7.442 | 7.425 | 7.452 | 7.501 | 7.556 | 7.625 | 7.706 | 7.785 | 7.876 | 8.007 | 8.152 | |
| 37 | 3.210 | 3.712 | 4.498 | 5.363 | 6.036 | 6.360 | 6.426 | 6.424 | 6.445 | 6.485 | 6.531 | 6.591 | 6.664 | 6.739 | 6.827 | 6.945 | 7.070 | |
| 38 | 2.730 | 3.153 | 3.808 | 4.547 | 5.147 | 5.466 | 5.555 | 5.566 | 5.582 | 5.613 | 5.653 | 5.706 | 5.772 | 5.844 | 5.928 | 6.035 | 6.142 | |
| 39 | 2.330 | 2.683 | 3.232 | 3.861 | 4.393 | 4.701 | 4.809 | 4.829 | 4.842 | 4.865 | 4.900 | 4.947 | 5.007 | 5.077 | 5.158 | 5.254 | 5.343 | |
| 40 | 1.995 | 2.291 | 2.751 | 3.285 | 3.754 | 4.049 | 4.169 | 4.197 | 4.206 | 4.223 | 4.253 | 4.296 | 4.352 | 4.419 | 4.497 | 4.583 | 4.657 | |
| 41 | 1.714 | 1.961 | 2.347 | 2.800 | 3.213 | 3.493 | 3.620 | 3.653 | 3.669 | 3.670 | 3.697 | 3.737 | 3.789 | 3.854 | 3.928 | 4.005 | 4.066 | |
| 42 | 1.476 | 1.685 | 2.009 | 2.393 | 2.756 | 3.018 | 3.148 | 3.185 | 3.187 | 3.195 | 3.220 | 3.257 | 3.306 | 3.368 | 3.439 | 3.507 | 3.557 | |
| 43 | 1.275 | 1.451 | 1.724 | 2.051 | 2.369 | 2.612 | 2.742 | 2.781 | 2.781 | 2.786 | 2.809 | 2.844 | 2.890 | 2.949 | 3.016 | 3.077 | 3.118 | |
| 44 | 1.104 | 1.253 | 1.484 | 1.762 | 2.042 | 2.266 | 2.393 | 2.432 | 2.431 | 2.434 | 2.455 | 2.488 | 2.531 | 2.587 | 2.651 | 2.706 | 2.738 | |
| 45 | 0.958 | 1.085 | 1.281 | 1.519 | 1.764 | 1.970 | 2.093 | 2.131 | 2.128 | 2.129 | 2.149 | 2.181 | 2.221 | 2.274 | 2.334 | 2.383 | 2.409 | |
| 46 | 0.833 | 0.942 | 1.108 | 1.312 | 1.529 | 1.717 | 1.833 | 1.869 | 1.866 | 1.866 | 1.885 | 1.915 | 1.953 | 2.003 | 2.060 | 2.103 | 2.124 | |
| 47 | 0.726 | 0.820 | 0.962 | 1.137 | 1.328 | 1.500 | 1.609 | 1.643 | 1.638 | 1.638 | 1.656 | 1.685 | 1.720 | 1.768 | 1.820 | 1.860 | 1.876 | |
| 48 | 0.634 | 0.715 | 0.837 | 0.989 | 1.157 | 1.313 | 1.414 | 1.446 | 1.441 | 1.440 | 1.458 | 1.485 | 1.518 | 1.562 | 1.611 | 1.647 | 1.660 | |
| 49 | 0.555 | 0.625 | 0.730 | 0.861 | 1.011 | 1.152 | 1.245 | 1.274 | 1.269 | 1.269 | 1.285 | 1.311 | 1.342 | 1.383 | 1.429 | 1.461 | 1.471 | |
| 50 | 0.487 | 0.547 | 0.638 | 0.753 | 0.885 | 1.013 | 1.098 | 1.125 | 1.119 | 1.119 | 1.135 | 1.159 | 1.188 | 1.226 | 1.269 | 1.298 | 1.306 | |
| 51 | 0.427 | 0.480 | 0.559 | 0.659 | 0.776 | 0.892 | 0.970 | 0.994 | 0.989 | 0.988 | 1.004 | 1.026 | 1.053 | 1.088 | 1.128 | 1.154 | 1.161 | |
| 52 | 0.376 | 0.421 | 0.490 | 0.578 | 0.682 | 0.787 | 0.858 | 0.879 | 0.874 | 0.874 | 0.888 | 0.910 | 0.934 | 0.967 | 1.003 | 1.028 | 1.034 | |
| 53 | 3.310 | 3.708 | 4.306 | 5.077 | 6.008 | 6.951 | 7.596 | 7.787 | 7.735 | 7.736 | 7.873 | 8.071 | 8.299 | 8.599 | 8.934 | 9.160 | 9.217 | - 4 |
| 54 | 2.919 | 3.267 | 3.789 | 4.466 | 5.294 | 6.144 | 6.729 | 6.900 | 6.85 | 6.852 | 6.981 | 7.165 | 7.375 | 7.651 | 7.960 | 8.170 | 8.222 | |
| 55 | 2.577 | 2.882 | 3.338 | 3.932 | 4.668 | 5.433 | 5.965 | 6.118 | 6.070 | 6.072 | 6.193 | 6.363 | 6.556 | 6.809 | 7.095 | 7.291 | 7.341 | |
| 56 | 2.278 | 2.545 | 2.943 | 3.464 | 4.117 | 4.805 | 5.288 | 5.427 | 5.381 | 5.383 | 5.495 | 5.652 | 5.828 | 6.061 | 6.325 | 6.508 | 6.557 | |
| 57 | 2.015 | 2.250 | 2.597 | 3.052 | 3.630 | 4.249 | 4.688 | 4.814 | 4.770 | 4.771 | 4.875 | 5.020 | 5.181 | 5.394 | 5.639 | 5.811 | 5.859 | |
| 58 | 1.784 | 1.990 | 2.292 | 2.689 | 3.200 | 3.755 | 4.154 | 4.269 | 4.227 | 4.227 | 4.323 | 4.456 | 4.603 | 4.799 | 5.026 | 5.188 | 5.236 | |
| 59 | 1.579 | 1.761 | 2.024 | 2.369 | 2.818 | 3.316 | 3.678 | 3.784 | 3.745 | 3.743 | 3.830 | 3.952 | 4.087 | 4.266 | 4.477 | 4.631 | 4.679 | |
| 60 | 1.398 | 1.558 | 1.787 | 2.086 | 2.480 | 2.925 | 3.254 | 3.351 | 3.315 | 3.312 | 3.391 | 3.502 | 3.625 | 3.790 | 3.986 | 4.131 | 4.179 | |
| 61 | 1.238 | 1.380 | 1.578 | 1.835 | 2.180 | 2.576 | 2.876 | 2.965 | 2.931 | 2.927 | 2.998 | 3.100 | 3.212 | 3.364 | 3.546 | 3.684 | 3.731 | |
| 62 | 1.096 | 1.221 | 1.393 | 1.614 | 1.914 | 2.266 | 2.538 | 2.620 | 2.588 | 2.583 | 2.647 | 2.739 | 2.842 | 2.982 | 3.152 | 3.282 | 3.329 | |
| 63 | 0.969 | 1.080 | 1.229 | 1.418 | 1.678 | 1.991 | 2.236 | 2.311 | 2.281 | 2.275 | 2.333 | 2.417 | 2.511 | 2.640 | 2.798 | 2.921 | 2.968 | |
| 64 | 0.856 | 0.955 | 1.084 | 1.245 | 1.470 | 1.746 | 1.966 | 2.035 | 2.007 | 2.001 | 2.052 | 2.128 | 2.214 | 2.334 | 2.481 | 2.597 | 2.643 | |
| 65 | 0.756 | 0.843 | 0.955 | 1.092 | 1.286 | 1.528 | 1.725 | 1.788 | 1.763 | 1.756 | 1.801 | 1.870 | 1.949 | 2.059 | 2.196 | 2.304 | 2.351 | |
| 66 | 0.666 | 0.744 | 0.841 | 0.958 | 1.124 | 1.336 | 1.511 | 1.567 | 1.544 | 1.537 | 1.578 | 1.640 | 1.712 | 1.814 | 1.942 | 2.045 | 2.088 | |
| 67 | 0.586 | 0.655 | 0.740 | 0.839 | 0.982 | 1.166 | 1.320 | 1.370 | 1.349 | 1.343 | 1.379 | 1.435 | 1.501 | 1.595 | 1.713 | 1.810 | 1.852 | |
| 68 | 0.515 | 0.576 | 0.650 | 0.735 | 0.857 | 1.017 | 1.151 | 1.194 | 1.175 | 1.170 | 1.202 | 1.253 | 1.313 | 1.399 | 1.509 | 1.600 | 1.640 | |
| 69 | 0.451 | 0.506 | 0.570 | 0.643 | 0.747 | 0.885 | 1.001 | 1.037 | 1.021 | 1.016 | 1.045 | 1.090 | 1.145 | 1.225 | 1.326 | 1.411 | 1.449 | |
| 70 | 0.394 | 0.443 | 0.500 | 0.562 | 0.652 | 0.769 | 0.868 | 0.899 | 0.884 | 0.881 | 0.907 | 0.947 | 0.997 | 1.069 | 1.163 | 1.242 | 1.278 | |
| 71 | 0.344 | 0.387 | 0.437 | 0.492 | 0.568 | 0.668 | 0.751 | 0.776 | 0.763 | 0.761 | 0.784 | 0.820 | 0.865 | 0.931 | 1.017 | 1.091 | 1.125 | |
| 72 | 2.997 | 3.380 | 3.821 | 4.293 | 4.943 | 5.785 | 6.473 | 6.673 | 6.567 | 6.556 | 6.764 | 7.083 | 7.486 | 8.091 | 8.877 | 9.553 | 9.879 | - 5 |
| 73 | 2.604 | 2.942 | 3.333 | 3.745 | 4.300 | 5.003 | 5.566 | 5.720 | 5.631 | 5.631 | 5.819 | 6.099 | 6.459 | 7.006 | 7.724 | 8.346 | 8.651 | |
| 74 | 2.259 | 2.556 | 2.901 | 3.262 | 3.734 | 4.317 | 4.770 | 4.885 | 4.810 | 4.822 | 4.991 | 5.237 | 5.555 | 6.048 | 6.700 | 7.269 | 7.552 | |
| 75 | 1.956 | 2.216 | 2.520 | 2.836 | 3.236 | 3.715 | 4.075 | 4.156 | 4.095 | 4.115 | 4.268 | 4.482 | 4.761 | 5.202 | 5.792 | 6.311 | 6.571 | |
| 76 | 1.692 | 1.918 | 2.185 | 2.458 | 2.795 | 3.187 | 3.468 | 3.523 | 3.473 | 3.501 | 3.639 | 3.824 | 4.066 | 4.458 | 4.989 | 5.459 | 5.696 | |
| 77 | 1.462 | 1.658 | 1.889 | 2.123 | 2.404 | 2.721 | 2.941 | 2.975 | 2.935 | 2.968 | 3.093 | 3.252 | 3.459 | 3.805 | 4.279 | 4.704 | 4.918 | |
| 78 | 1.263 | 1.432 | 1.629 | 1.825 | 2.056 | 2.312 | 2.482 | 2.502 | 2.470 | 2.507 | 2.620 | 2.755 | 2.931 | 3.233 | 3.655 | 4.035 | 4.225 | |
| 79 | 1.091 | 1.237 | 1.401 | 1.560 | 1.746 | 1.952 | 2.086 | 2.097 | 2.072 | 2.110 | 2.211 | 2.325 | 2.472 | 2.734 | 3.107 | 3.445 | 3.612 | |
| 80 | 0.943 | 1.068 | 1.202 | 1.323 | 1.468 | 1.635 | 1.743 | 1.750 | 1.730 | 1.769 | 1.859 | 1.954 | 2.076 | 2.300 | 2.628 | 2.925 | 3.070 | |

JULY                                    ZONAL MEAN DENSITY (KG M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.094 | 1.111 | 1.128 | 1.151 | 1.192 | 1.253 | 1.310 | 1.340 | 1.341 | 1.351 | 1.325 | 1.316 | 1.293 | 1.256 | 1.220 | 1.200 | 1.195 | - 1 |
| 19 | 0.943 | 0.955 | 0.968 | 0.985 | 1.029 | 1.067 | 1.111 | 1.130 | 1.126 | 1.116 | 1.110 | 1.106 | 1.094 | 1.072 | 1.050 | 1.036 | 1.033 | |
| 20 | 7.861 | 8.050 | 8.241 | 8.424 | 8.693 | 9.060 | 9.380 | 9.514 | 9.468 | 9.322 | 9.329 | 9.324 | 9.277 | 9.156 | 9.019 | 8.932 | 8.907 | - 2 |
| 21 | 6.423 | 6.691 | 6.974 | 7.196 | 7.419 | 7.684 | 7.914 | 8.009 | 7.969 | 7.892 | 7.866 | 7.883 | 7.881 | 7.823 | 7.743 | 7.690 | 7.675 | |
| 22 | 5.187 | 5.512 | 5.872 | 6.140 | 6.336 | 6.523 | 6.681 | 6.749 | 6.720 | 6.664 | 6.651 | 6.683 | 6.707 | 6.688 | 6.644 | 6.615 | 6.610 | |
| 23 | 4.165 | 4.576 | 4.925 | 5.237 | 5.476 | 5.545 | 5.648 | 5.695 | 5.679 | 5.641 | 5.639 | 5.678 | 5.717 | 5.720 | 5.699 | 5.686 | 5.691 | |
| 24 | 3.340 | 3.690 | 4.119 | 4.455 | 4.654 | 4.724 | 4.784 | 4.816 | 4.809 | 4.787 | 4.792 | 4.834 | 4.879 | 4.895 | 4.888 | 4.887 | 4.899 | |
| 25 | 2.683 | 3.014 | 3.439 | 3.786 | 3.969 | 4.033 | 4.062 | 4.081 | 4.082 | 4.072 | 4.081 | 4.122 | 4.170 | 4.192 | 4.192 | 4.198 | 4.218 | |
| 26 | 2.164 | 2.465 | 2.868 | 3.217 | 3.400 | 3.449 | 3.456 | 3.466 | 3.472 | 3.473 | 3.482 | 3.521 | 3.567 | 3.591 | 3.595 | 3.607 | 3.632 | |
| 27 | 1.755 | 2.020 | 2.391 | 2.729 | 2.914 | 2.955 | 2.948 | 2.950 | 2.959 | 2.964 | 2.976 | 3.011 | 3.055 | 3.079 | 3.085 | 3.099 | 3.128 | |
| 28 | 1.432 | 1.661 | 1.994 | 2.314 | 2.496 | 2.534 | 2.519 | 2.516 | 2.527 | 2.534 | 2.547 | 2.578 | 2.618 | 2.641 | 2.648 | 2.664 | 2.695 | |
| 29 | 1.176 | 1.371 | 1.664 | 1.960 | 2.138 | 2.176 | 2.156 | 2.159 | 2.161 | 2.170 | 2.182 | 2.210 | 2.246 | 2.267 | 2.275 | 2.292 | 2.323 | |
| 30 | 0.973 | 1.137 | 1.391 | 1.660 | 1.830 | 1.869 | 1.849 | 1.840 | 1.850 | 1.861 | 1.871 | 1.896 | 1.928 | 1.948 | 1.955 | 1.972 | 2.003 | |
| 31 | 0.810 | 0.947 | 1.165 | 1.405 | 1.565 | 1.605 | 1.587 | 1.577 | 1.587 | 1.597 | 1.606 | 1.628 | 1.656 | 1.674 | 1.682 | 1.699 | 1.728 | |
| 32 | 0.679 | 0.792 | 0.978 | 1.190 | 1.338 | 1.379 | 1.363 | 1.354 | 1.362 | 1.372 | 1.380 | 1.399 | 1.424 | 1.441 | 1.449 | 1.465 | 1.492 | |
| 33 | 0.572 | 0.665 | 0.825 | 1.008 | 1.143 | 1.184 | 1.172 | 1.164 | 1.171 | 1.179 | 1.187 | 1.203 | 1.226 | 1.241 | 1.249 | 1.264 | 1.289 | |
| 34 | 0.484 | 0.561 | 0.694 | 0.855 | 0.976 | 1.017 | 1.009 | 1.002 | 1.007 | 1.015 | 1.021 | 1.036 | 1.056 | 1.070 | 1.078 | 1.093 | 1.114 | |
| 35 | 4.119 | 4.756 | 5.874 | 7.254 | 8.337 | 8.735 | 8.690 | 8.629 | 8.676 | 8.738 | 8.797 | 8.923 | 9.104 | 9.241 | 9.323 | 9.453 | 9.646 | - 3 |
| 36 | 3.518 | 4.046 | 4.985 | 6.165 | 7.120 | 7.504 | 7.490 | 7.443 | 7.480 | 7.533 | 7.585 | 7.697 | 7.860 | 7.989 | 8.073 | 8.191 | 8.357 | |
| 37 | 3.014 | 3.454 | 4.243 | 5.247 | 6.083 | 6.447 | 6.461 | 6.428 | 6.457 | 6.500 | 6.547 | 6.647 | 6.793 | 6.916 | 7.000 | 7.108 | 7.250 | |
| 38 | 2.590 | 2.959 | 3.622 | 4.475 | 5.202 | 5.542 | 5.574 | 5.558 | 5.580 | 5.615 | 5.657 | 5.747 | 5.880 | 5.997 | 6.090 | 6.178 | 6.297 | |
| 39 | 2.230 | 2.543 | 3.102 | 3.824 | 4.453 | 4.767 | 4.822 | 4.812 | 4.829 | 4.856 | 4.894 | 4.976 | 5.097 | 5.208 | 5.290 | 5.379 | 5.478 | |
| 40 | 1.925 | 2.191 | 2.664 | 3.276 | 3.818 | 4.106 | 4.173 | 4.172 | 4.184 | 4.206 | 4.241 | 4.315 | 4.425 | 4.530 | 4.612 | 4.691 | 4.772 | |
| 41 | 1.664 | 1.893 | 2.295 | 2.813 | 3.279 | 3.542 | 3.616 | 3.623 | 3.631 | 3.648 | 3.679 | 3.747 | 3.848 | 3.948 | 4.027 | 4.098 | 4.164 | |
| 42 | 1.441 | 1.639 | 1.983 | 2.422 | 2.822 | 3.060 | 3.139 | 3.151 | 3.157 | 3.169 | 3.198 | 3.260 | 3.352 | 3.446 | 3.523 | 3.587 | 3.640 | |
| 43 | 1.249 | 1.423 | 1.717 | 2.091 | 2.435 | 2.649 | 2.729 | 2.745 | 2.748 | 2.758 | 2.784 | 2.840 | 2.925 | 3.014 | 3.088 | 3.145 | 3.188 | |
| 44 | 1.085 | 1.237 | 1.491 | 1.810 | 2.106 | 2.298 | 2.378 | 2.395 | 2.397 | 2.404 | 2.428 | 2.480 | 2.557 | 2.641 | 2.711 | 2.763 | 2.797 | |
| 45 | 0.944 | 1.078 | 1.298 | 1.571 | 1.827 | 1.999 | 2.076 | 2.094 | 2.095 | 2.099 | 2.121 | 2.169 | 2.240 | 2.318 | 2.385 | 2.431 | 2.458 | |
| 46 | 0.822 | 0.941 | 1.132 | 1.368 | 1.589 | 1.743 | 1.816 | 1.834 | 1.834 | 1.837 | 1.857 | 1.900 | 1.966 | 2.039 | 2.102 | 2.143 | 2.164 | |
| 47 | 0.717 | 0.822 | 0.990 | 1.193 | 1.386 | 1.524 | 1.592 | 1.610 | 1.608 | 1.610 | 1.628 | 1.668 | 1.728 | 1.796 | 1.855 | 1.893 | 1.909 | |
| 48 | 0.627 | 0.720 | 0.867 | 1.044 | 1.213 | 1.336 | 1.399 | 1.415 | 1.413 | 1.414 | 1.431 | 1.467 | 1.522 | 1.585 | 1.640 | 1.674 | 1.687 | |
| 49 | 0.549 | 0.631 | 0.760 | 0.915 | 1.064 | 1.174 | 1.231 | 1.246 | 1.243 | 1.244 | 1.259 | 1.293 | 1.343 | 1.401 | 1.451 | 1.482 | 1.494 | |
| 50 | 0.482 | 0.555 | 0.668 | 0.804 | 0.935 | 1.034 | 1.086 | 1.100 | 1.096 | 1.096 | 1.110 | 1.141 | 1.186 | 1.240 | 1.287 | 1.315 | 1.324 | |
| 51 | 0.424 | 0.488 | 0.588 | 0.707 | 0.823 | 0.912 | 0.960 | 0.971 | 0.967 | 0.967 | 0.980 | 1.008 | 1.050 | 1.098 | 1.142 | 1.168 | 1.176 | |
| 52 | 0.373 | 0.430 | 0.518 | 0.623 | 0.726 | 0.806 | 0.849 | 0.859 | 0.855 | 0.854 | 0.866 | 0.892 | 0.930 | 0.974 | 1.014 | 1.038 | 1.046 | |
| 53 | 3.294 | 3.792 | 4.564 | 5.494 | 6.415 | 7.136 | 7.525 | 7.612 | 7.566 | 7.556 | 7.665 | 7.900 | 8.245 | 8.651 | 9.017 | 9.238 | 9.307 | - 4 |
| 54 | 2.913 | 3.350 | 4.027 | 4.848 | 5.670 | 6.320 | 6.673 | 6.748 | 6.700 | 6.788 | 7.003 | 7.316 | 7.686 | 8.022 | 8.227 | 8.273 | | |
| 55 | 2.581 | 2.962 | 3.556 | 4.280 | 5.013 | 5.600 | 5.920 | 5.985 | 5.936 | 5.924 | 6.016 | 6.212 | 6.495 | 6.832 | 7.140 | 7.332 | 7.395 | |
| 56 | 2.290 | 2.623 | 3.142 | 3.778 | 4.431 | 4.962 | 5.254 | 5.309 | 5.261 | 5.249 | 5.333 | 5.511 | 5.768 | 6.073 | 6.357 | 6.536 | 6.599 | |
| 57 | 2.034 | 2.324 | 2.776 | 3.335 | 3.914 | 4.394 | 4.660 | 4.710 | 4.663 | 4.650 | 4.727 | 4.889 | 5.123 | 5.399 | 5.661 | 5.829 | 5.890 | |
| 58 | 1.809 | 2.061 | 2.454 | 2.941 | 3.454 | 3.887 | 4.132 | 4.177 | 4.132 | 4.119 | 4.189 | 4.335 | 4.545 | 4.798 | 5.040 | 5.199 | 5.259 | |
| 59 | 1.609 | 1.829 | 2.169 | 2.593 | 3.044 | 3.434 | 3.659 | 3.702 | 3.660 | 3.647 | 3.710 | 3.842 | 4.031 | 4.261 | 4.486 | 4.637 | 4.696 | |
| 60 | 1.431 | 1.623 | 1.917 | 2.283 | 2.679 | 3.029 | 3.237 | 3.278 | 3.239 | 3.226 | 3.282 | 3.401 | 3.571 | 3.782 | 3.991 | 4.135 | 4.192 | |
| 61 | 1.273 | 1.440 | 1.694 | 2.008 | 2.353 | 2.667 | 2.859 | 2.899 | 2.863 | 2.850 | 2.901 | 3.007 | 3.160 | 3.353 | 3.548 | 3.685 | 3.742 | |
| 62 | 1.132 | 1.277 | 1.496 | 1.764 | 2.063 | 2.343 | 2.520 | 2.560 | 2.528 | 2.515 | 2.560 | 2.655 | 2.792 | 2.969 | 3.152 | 3.283 | 3.338 | |
| 63 | 1.005 | 1.132 | 1.320 | 1.548 | 1.806 | 2.054 | 2.217 | 2.257 | 2.229 | 2.216 | 2.256 | 2.340 | 2.463 | 2.625 | 2.797 | 2.923 | 2.976 | |
| 64 | 0.891 | 1.003 | 1.163 | 1.357 | 1.578 | 1.797 | 1.946 | 1.986 | 1.962 | 1.950 | 1.983 | 2.057 | 2.168 | 2.318 | 2.480 | 2.599 | 2.651 | |
| 65 | 0.789 | 0.887 | 1.024 | 1.188 | 1.376 | 1.569 | 1.705 | 1.744 | 1.723 | 1.712 | 1.741 | 1.805 | 1.905 | 2.043 | 2.195 | 2.310 | 2.360 | |
| 66 | 0.697 | 0.783 | 0.901 | 1.039 | 1.199 | 1.367 | 1.490 | 1.528 | 1.511 | 1.501 | 1.524 | 1.580 | 1.669 | 1.796 | 1.940 | 2.050 | 2.098 | |
| 67 | 0.614 | 0.690 | 0.791 | 0.907 | 1.043 | 1.189 | 1.299 | 1.336 | 1.322 | 1.312 | 1.332 | 1.380 | 1.459 | 1.577 | 1.712 | 1.816 | 1.863 | |
| 68 | 0.540 | 0.606 | 0.693 | 0.791 | 0.906 | 1.032 | 1.130 | 1.165 | 1.154 | 1.145 | 1.160 | 1.201 | 1.272 | 1.381 | 1.508 | 1.607 | 1.652 | |
| 69 | 0.474 | 0.532 | 0.607 | 0.689 | 0.786 | 0.895 | 0.981 | 1.013 | 1.005 | 0.997 | 1.009 | 1.043 | 1.107 | 1.206 | 1.325 | 1.419 | 1.462 | |
| 70 | 0.415 | 0.465 | 0.530 | 0.600 | 0.682 | 0.775 | 0.850 | 0.879 | 0.873 | 0.866 | 0.875 | 0.903 | 0.960 | 1.051 | 1.161 | 1.250 | 1.292 | |
| 71 | 0.362 | 0.406 | 0.462 | 0.521 | 0.591 | 0.670 | 0.734 | 0.760 | 0.757 | 0.750 | 0.756 | 0.780 | 0.830 | 0.913 | 1.016 | 1.099 | 1.139 | |
| 72 | 0.316 | 0.354 | 0.402 | 0.453 | 0.512 | 0.579 | 0.633 | 0.656 | 0.654 | 0.648 | 0.652 | 0.672 | 0.716 | 0.791 | 0.886 | 0.964 | 1.002 | |
| 73 | 2.743 | 3.072 | 3.486 | 3.927 | 4.431 | 4.991 | 5.449 | 5.645 | 5.632 | 5.584 | 5.617 | 5.771 | 6.155 | 6.835 | 7.698 | 8.423 | 8.786 | - 5 |
| 74 | 2.379 | 2.661 | 3.020 | 3.401 | 3.830 | 4.298 | 4.627 | 4.842 | 4.836 | 4.797 | 4.814 | 4.944 | 5.278 | 5.885 | 6.668 | 7.336 | 7.678 | |
| 75 | 2.060 | 2.301 | 2.610 | 2.940 | 3.305 | 3.695 | 4.005 | 4.140 | 4.139 | 4.108 | 4.118 | 4.224 | 4.512 | 5.051 | 5.754 | 6.364 | 6.684 | |
| 76 | 1.780 | 1.986 | 2.252 | 2.536 | 2.846 | 3.168 | 3.419 | 3.528 | 3.529 | 3.506 | 3.513 | 3.599 | 3.847 | 4.319 | 4.945 | 5.492 | 5.792 | |
| 77 | 1.536 | 1.712 | 1.940 | 2.182 | 2.442 | 2.707 | 2.910 | 2.995 | 2.997 | 2.981 | 2.989 | 3.060 | 3.270 | 3.680 | 4.231 | 4.724 | 4.994 | |
| 78 | 1.323 | 1.475 | 1.668 | 1.871 | 2.086 | 2.304 | 2.467 | 2.533 | 2.533 | 2.525 | 2.535 | 2.595 | 2.772 | 3.122 | 3.602 | 4.038 | 4.281 | |
| 79 | 1.138 | 1.270 | 1.433 | 1.598 | 1.772 | 1.950 | 2.083 | 2.133 | 2.131 | 2.129 | 2.144 | 2.196 | 2.343 | 2.638 | 3.050 | 3.431 | 3.646 | |
| 80 | 0.977 | 1.095 | 1.231 | 1.358 | 1.493 | 1.639 | 1.749 | 1.787 | 1.783 | 1.786 | 1.801 | 1.854 | 1.974 | 2.219 | 2.568 | 2.897 | 3.083 | |

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ZONAL MEAN DENSITY (KG/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.187 | 1.168 | 1.147 | 1.149 | 1.190 | 1.259 | 1.323 | 1.353 | 1.352 | 1.337 | 1.323 | 1.309 | 1.284 | 1.251 | 1.217 | 1.194 | 1.182 - 1 |
| 19 | 1.022 | 1.005 | 0.984 | 0.983 | 1.017 | 1.073 | 1.122 | 1.143 | 1.138 | 1.124 | 1.114 | 1.105 | 1.091 | 1.070 | 1.047 | 1.030 | 1.021 |
| 20 | 8.404 | 8.399 | 8.352 | 8.398 | 8.678 | 9.114 | 9.429 | 9.619 | 9.563 | 9.451 | 9.381 | 9.343 | 9.273 | 9.146 | 8.995 | 8.872 | 8.801 - 2 |
| 21 | 6.734 | 6.901 | 7.036 | 7.167 | 7.403 | 7.728 | 7.994 | 8.090 | 8.038 | 7.953 | 7.915 | 7.913 | 7.888 | 7.814 | 7.715 | 7.631 | 7.581 |
| 22 | 5.323 | 5.613 | 5.898 | 6.112 | 6.320 | 6.555 | 6.742 | 6.807 | 6.764 | 6.704 | 6.692 | 6.714 | 6.717 | 6.676 | 6.612 | 6.557 | 6.526 |
| 23 | 4.186 | 4.544 | 4.929 | 5.208 | 5.401 | 5.568 | 5.694 | 5.736 | 5.704 | 5.665 | 5.671 | 5.707 | 5.726 | 5.707 | 5.666 | 5.631 | 5.614 |
| 24 | 3.296 | 3.677 | 4.113 | 4.435 | 4.621 | 4.739 | 4.819 | 4.844 | 4.822 | 4.800 | 4.816 | 4.859 | 4.887 | 4.880 | 4.854 | 4.834 | 4.828 |
| 25 | 2.608 | 2.981 | 3.431 | 3.776 | 3.957 | 4.042 | 4.087 | 4.101 | 4.082 | 4.076 | 4.098 | 4.143 | 4.175 | 4.176 | 4.160 | 4.149 | 4.151 |
| 26 | 2.080 | 2.426 | 2.864 | 3.213 | 3.392 | 3.455 | 3.476 | 3.480 | 3.472 | 3.470 | 3.493 | 3.537 | 3.571 | 3.576 | 3.566 | 3.561 | 3.568 |
| 27 | 1.674 | 1.995 | 2.394 | 2.734 | 2.909 | 2.958 | 2.962 | 2.960 | 2.956 | 2.960 | 2.983 | 3.023 | 3.056 | 3.065 | 3.058 | 3.056 | 3.067 |
| 28 | 1.362 | 1.635 | 2.004 | 2.327 | 2.496 | 2.536 | 2.530 | 2.523 | 2.523 | 2.529 | 2.551 | 2.587 | 2.618 | 2.628 | 2.623 | 2.624 | 2.636 |
| 29 | 1.120 | 1.354 | 1.683 | 1.980 | 2.142 | 2.177 | 2.164 | 2.155 | 2.156 | 2.164 | 2.184 | 2.216 | 2.245 | 2.255 | 2.252 | 2.254 | 2.266 |
| 30 | 0.930 | 1.130 | 1.416 | 1.686 | 1.838 | 1.870 | 1.855 | 1.844 | 1.846 | 1.855 | 1.872 | 1.899 | 1.926 | 1.936 | 1.935 | 1.937 | 1.949 |
| 31 | 0.780 | 0.949 | 1.196 | 1.436 | 1.576 | 1.607 | 1.591 | 1.580 | 1.582 | 1.591 | 1.605 | 1.629 | 1.653 | 1.664 | 1.663 | 1.666 | 1.677 |
| 32 | 0.660 | 0.801 | 1.013 | 1.224 | 1.352 | 1.382 | 1.367 | 1.355 | 1.358 | 1.366 | 1.378 | 1.399 | 1.420 | 1.431 | 1.431 | 1.434 | 1.444 |
| 33 | 0.562 | 0.680 | 0.860 | 1.044 | 1.159 | 1.188 | 1.175 | 1.164 | 1.166 | 1.174 | 1.184 | 1.202 | 1.221 | 1.231 | 1.232 | 1.235 | 1.244 |
| 34 | 0.482 | 0.581 | 0.733 | 0.892 | 0.994 | 1.022 | 1.011 | 1.001 | 1.003 | 1.009 | 1.018 | 1.034 | 1.051 | 1.061 | 1.063 | 1.065 | 1.073 |
| 35 | 4.149 | 4.980 | 6.268 | 7.628 | 8.526 | 8.785 | 8.703 | 8.619 | 8.631 | 8.685 | 8.766 | 8.897 | 9.049 | 9.145 | 9.171 | 9.198 | 9.258 - 3 |
| 36 | 3.585 | 4.286 | 5.375 | 6.534 | 7.315 | 7.557 | 7.499 | 7.428 | 7.435 | 7.481 | 7.552 | 7.667 | 7.802 | 7.894 | 7.926 | 7.952 | 8.000 |
| 37 | 3.106 | 3.701 | 4.623 | 5.606 | 6.279 | 6.503 | 6.467 | 6.409 | 6.412 | 6.450 | 6.513 | 6.615 | 6.735 | 6.822 | 6.859 | 6.885 | 6.921 |
| 38 | 2.696 | 3.205 | 3.988 | 4.819 | 5.394 | 5.600 | 5.584 | 5.537 | 5.537 | 5.568 | 5.624 | 5.714 | 5.822 | 5.904 | 5.945 | 5.969 | 5.996 |
| 39 | 2.342 | 2.781 | 3.449 | 4.151 | 4.640 | 4.827 | 4.826 | 4.791 | 4.787 | 4.813 | 4.864 | 4.944 | 5.039 | 5.117 | 5.161 | 5.184 | 5.202 |
| 40 | 2.037 | 2.420 | 2.991 | 3.583 | 3.996 | 4.165 | 4.177 | 4.152 | 4.146 | 4.167 | 4.212 | 4.283 | 4.369 | 4.442 | 4.487 | 4.509 | 4.521 |
| 41 | 1.773 | 2.108 | 2.600 | 3.100 | 3.448 | 3.599 | 3.621 | 3.604 | 3.597 | 3.613 | 3.653 | 3.717 | 3.794 | 3.863 | 3.908 | 3.929 | 3.935 |
| 42 | 1.543 | 1.840 | 2.265 | 2.688 | 2.981 | 3.115 | 3.145 | 3.134 | 3.126 | 3.138 | 3.175 | 3.232 | 3.301 | 3.365 | 3.410 | 3.430 | 3.431 |
| 43 | 1.345 | 1.608 | 1.978 | 2.336 | 2.582 | 2.702 | 2.736 | 2.731 | 2.723 | 2.732 | 2.764 | 2.815 | 2.877 | 2.937 | 2.981 | 2.999 | 2.996 |
| 44 | 1.172 | 1.407 | 1.730 | 2.035 | 2.242 | 2.348 | 2.386 | 2.385 | 2.377 | 2.383 | 2.411 | 2.457 | 2.512 | 2.569 | 2.611 | 2.627 | 2.622 |
| 45 | 1.023 | 1.233 | 1.517 | 1.777 | 1.952 | 2.046 | 2.085 | 2.088 | 2.079 | 2.083 | 2.107 | 2.148 | 2.198 | 2.250 | 2.291 | 2.305 | 2.297 |
| 46 | 0.894 | 1.082 | 1.331 | 1.554 | 1.703 | 1.787 | 1.826 | 1.832 | 1.823 | 1.824 | 1.845 | 1.882 | 1.927 | 1.976 | 2.013 | 2.026 | 2.017 |
| 47 | 0.783 | 0.951 | 1.170 | 1.362 | 1.489 | 1.564 | 1.603 | 1.610 | 1.602 | 1.601 | 1.619 | 1.652 | 1.693 | 1.737 | 1.772 | 1.783 | 1.773 |
| 48 | 0.687 | 0.836 | 1.030 | 1.196 | 1.305 | 1.373 | 1.410 | 1.419 | 1.411 | 1.409 | 1.423 | 1.452 | 1.490 | 1.531 | 1.563 | 1.572 | 1.562 |
| 49 | 0.604 | 0.737 | 0.908 | 1.052 | 1.147 | 1.207 | 1.244 | 1.253 | 1.245 | 1.241 | 1.253 | 1.279 | 1.313 | 1.351 | 1.380 | 1.388 | 1.377 |
| 50 | 0.532 | 0.650 | 0.800 | 0.926 | 1.009 | 1.064 | 1.099 | 1.108 | 1.101 | 1.096 | 1.105 | 1.128 | 1.159 | 1.193 | 1.220 | 1.227 | 1.216 |
| 51 | 0.470 | 0.574 | 0.707 | 0.817 | 0.889 | 0.939 | 0.972 | 0.982 | 0.975 | 0.969 | 0.976 | 0.996 | 1.024 | 1.056 | 1.080 | 1.086 | 1.075 |
| 52 | 4.161 | 5.080 | 6.240 | 7.202 | 7.845 | 8.305 | 8.616 | 8.712 | 8.642 | 8.577 | 8.632 | 8.806 | 9.060 | 9.350 | 9.572 | 9.616 | 9.516 - 4 |
| 53 | 3.692 | 4.499 | 5.513 | 6.354 | 6.926 | 7.349 | 7.644 | 7.737 | 7.669 | 7.599 | 7.639 | 7.791 | 8.022 | 8.287 | 8.488 | 8.524 | 8.430 |
| 54 | 3.282 | 3.988 | 4.871 | 5.606 | 6.117 | 6.508 | 6.786 | 6.875 | 6.809 | 6.736 | 6.763 | 6.897 | 7.106 | 7.348 | 7.530 | 7.561 | 7.474 |
| 55 | 2.923 | 3.538 | 4.305 | 4.945 | 5.401 | 5.763 | 6.026 | 6.111 | 6.047 | 5.973 | 5.990 | 6.107 | 6.296 | 6.516 | 6.682 | 6.710 | 6.630 |
| 56 | 2.606 | 3.140 | 3.803 | 4.359 | 4.766 | 5.102 | 5.350 | 5.431 | 5.370 | 5.296 | 5.305 | 5.407 | 5.578 | 5.779 | 5.931 | 5.956 | 5.884 |
| 57 | 2.325 | 2.788 | 3.359 | 3.840 | 4.202 | 4.513 | 4.747 | 4.824 | 4.766 | 4.694 | 4.697 | 4.786 | 4.940 | 5.123 | 5.263 | 5.288 | 5.224 |
| 58 | 2.075 | 2.474 | 2.965 | 3.379 | 3.700 | 3.987 | 4.207 | 4.281 | 4.226 | 4.157 | 4.156 | 4.235 | 4.372 | 4.538 | 4.668 | 4.695 | 4.640 |
| 59 | 1.851 | 2.196 | 2.615 | 2.969 | 3.253 | 3.518 | 3.725 | 3.795 | 3.744 | 3.678 | 3.675 | 3.743 | 3.866 | 4.018 | 4.139 | 4.168 | 4.121 |
| 60 | 1.649 | 1.947 | 2.304 | 2.606 | 2.855 | 3.098 | 3.292 | 3.359 | 3.312 | 3.251 | 3.247 | 3.306 | 3.415 | 3.553 | 3.667 | 3.699 | 3.660 |
| 61 | 1.468 | 1.724 | 2.028 | 2.283 | 2.501 | 2.723 | 2.904 | 2.968 | 2.926 | 2.870 | 2.865 | 2.916 | 3.012 | 3.138 | 3.246 | 3.281 | 3.250 |
| 62 | 1.304 | 1.525 | 1.783 | 1.998 | 2.187 | 2.388 | 2.557 | 2.618 | 2.581 | 2.530 | 2.525 | 2.569 | 2.653 | 2.767 | 2.871 | 2.910 | 2.886 |
| 63 | 1.155 | 1.346 | 1.565 | 1.745 | 1.908 | 2.090 | 2.247 | 2.305 | 2.272 | 2.227 | 2.222 | 2.259 | 2.333 | 2.437 | 2.536 | 2.578 | 2.562 |
| 64 | 1.022 | 1.186 | 1.372 | 1.522 | 1.662 | 1.825 | 1.970 | 2.025 | 1.997 | 1.958 | 1.953 | 1.984 | 2.048 | 2.143 | 2.238 | 2.283 | 2.273 |
| 65 | 0.901 | 1.043 | 1.200 | 1.325 | 1.445 | 1.591 | 1.723 | 1.775 | 1.752 | 1.718 | 1.713 | 1.740 | 1.795 | 1.881 | 1.972 | 2.020 | 2.016 |
| 66 | 0.793 | 0.916 | 1.048 | 1.152 | 1.254 | 1.384 | 1.504 | 1.553 | 1.535 | 1.506 | 1.501 | 1.522 | 1.570 | 1.648 | 1.735 | 1.786 | 1.787 |
| 67 | 0.696 | 0.802 | 0.914 | 1.000 | 1.087 | 1.202 | 1.310 | 1.356 | 1.342 | 1.318 | 1.314 | 1.330 | 1.370 | 1.441 | 1.525 | 1.577 | 1.582 |
| 68 | 0.609 | 0.700 | 0.795 | 0.867 | 0.941 | 1.042 | 1.139 | 1.182 | 1.172 | 1.152 | 1.148 | 1.160 | 1.194 | 1.258 | 1.337 | 1.390 | 1.400 |
| 69 | 0.532 | 0.610 | 0.691 | 0.751 | 0.814 | 0.902 | 0.988 | 1.028 | 1.021 | 1.005 | 1.001 | 1.010 | 1.038 | 1.096 | 1.171 | 1.224 | 1.237 |
| 70 | 0.464 | 0.531 | 0.599 | 0.649 | 0.704 | 0.781 | 0.856 | 0.892 | 0.889 | 0.876 | 0.872 | 0.877 | 0.900 | 0.953 | 1.024 | 1.076 | 1.091 |
| 71 | 4.037 | 4.606 | 5.183 | 5.614 | 6.085 | 6.750 | 7.409 | 7.734 | 7.720 | 7.622 | 7.579 | 7.608 | 7.798 | 8.269 | 8.927 | 9.435 | 9.604 - 5 |
| 72 | 3.508 | 3.990 | 4.479 | 4.848 | 5.257 | 5.831 | 6.400 | 6.689 | 6.693 | 6.620 | 6.577 | 6.585 | 6.739 | 7.160 | 7.768 | 8.255 | 8.435 |
| 73 | 3.045 | 3.450 | 3.865 | 4.184 | 4.540 | 5.033 | 5.520 | 5.773 | 5.791 | 5.738 | 5.696 | 5.687 | 5.812 | 6.186 | 6.741 | 7.202 | 7.387 |
| 74 | 2.640 | 2.979 | 3.330 | 3.608 | 3.919 | 4.341 | 4.753 | 4.971 | 4.997 | 4.961 | 4.921 | 4.902 | 5.001 | 5.330 | 5.833 | 6.263 | 6.447 |
| 75 | 2.285 | 2.569 | 2.867 | 3.109 | 3.380 | 3.739 | 4.085 | 4.269 | 4.298 | 4.275 | 4.241 | 4.214 | 4.293 | 4.580 | 5.031 | 5.425 | 5.603 |
| 76 | 1.974 | 2.213 | 2.466 | 2.676 | 2.911 | 3.215 | 3.503 | 3.655 | 3.684 | 3.671 | 3.642 | 3.614 | 3.675 | 3.924 | 4.323 | 4.680 | 4.847 |
| 77 | 1.702 | 1.905 | 2.120 | 2.301 | 2.502 | 2.758 | 2.995 | 3.118 | 3.142 | 3.137 | 3.116 | 3.089 | 3.138 | 3.350 | 3.698 | 4.016 | 4.171 |
| 78 | 1.461 | 1.638 | 1.823 | 1.975 | 2.144 | 2.358 | 2.552 | 2.648 | 2.666 | 2.665 | 2.654 | 2.633 | 2.670 | 2.849 | 3.149 | 3.428 | 3.567 |
| 79 | 1.249 | 1.406 | 1.567 | 1.693 | 1.829 | 2.006 | 2.165 | 2.237 | 2.246 | 2.249 | 2.249 | 2.235 | 2.265 | 2.412 | 2.667 | 2.908 | 3.030 |
| 80 | 1.059 | 1.207 | 1.349 | 1.447 | 1.552 | 1.697 | 1.827 | 1.878 | 1.877 | 1.882 | 1.893 | 1.889 | 1.913 | 2.032 | 2.245 | 2.451 | 2.555 |

SEPTEMBER

ZONAL MEAN DENSITY (KG/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.136 | 1.083 | 1.065 | 1.112 | 1.201 | 1.280 | 1.325 | 1.345 | 1.351 | 1.343 | 1.323 | 1.298 | 1.266 | 1.224 | 1.179 | 1.151 | 1.143 - 1 |
| 19 | 0.961 | 0.924 | 0.912 | 0.953 | 1.026 | 1.089 | 1.122 | 1.134 | 1.136 | 1.129 | 1.116 | 1.100 | 1.079 | 1.049 | 1.015 | 0.993 | 0.987 |
| 20 | 7.887 | 7.740 | 7.775 | 8.164 | 8.762 | 9.243 | 9.472 | 9.538 | 9.533 | 9.481 | 9.404 | 9.320 | 9.190 | 8.973 | 8.721 | 8.549 | 8.496 - 2 |
| 21 | 6.366 | 6.416 | 6.603 | 6.995 | 7.478 | 7.835 | 7.991 | 8.022 | 8.004 | 7.966 | 7.928 | 7.895 | 7.822 | 7.670 | 7.480 | 7.346 | 7.302 |
| 22 | 5.097 | 5.288 | 5.594 | 5.994 | 6.386 | 6.643 | 6.743 | 6.753 | 6.730 | 6.703 | 6.693 | 6.694 | 6.660 | 6.553 | 6.410 | 6.306 | 6.270 |
| 23 | 4.074 | 4.350 | 4.733 | 5.135 | 5.458 | 5.639 | 5.698 | 5.695 | 5.672 | 5.655 | 5.661 | 5.683 | 5.673 | 5.600 | 5.491 | 5.410 | 5.381 |
| 24 | 3.264 | 3.581 | 4.002 | 4.399 | 4.670 | 4.794 | 4.823 | 4.813 | 4.793 | 4.783 | 4.799 | 4.831 | 4.837 | 4.787 | 4.703 | 4.640 | 4.617 |
| 25 | 2.630 | 2.955 | 3.384 | 3.767 | 3.999 | 4.083 | 4.091 | 4.077 | 4.061 | 4.057 | 4.077 | 4.113 | 4.127 | 4.093 | 4.029 | 3.978 | 3.961 |
| 26 | 2.135 | 2.449 | 2.864 | 3.225 | 3.427 | 3.484 | 3.477 | 3.461 | 3.450 | 3.449 | 3.470 | 3.506 | 3.525 | 3.502 | 3.451 | 3.411 | 3.397 |
| 27 | 1.749 | 2.038 | 2.426 | 2.761 | 2.938 | 2.977 | 2.961 | 2.945 | 2.938 | 2.940 | 2.960 | 2.993 | 3.013 | 2.997 | 2.957 | 2.924 | 2.913 |
| 28 | 1.446 | 1.706 | 2.057 | 2.363 | 2.520 | 2.542 | 2.527 | 2.511 | 2.507 | 2.511 | 2.529 | 2.558 | 2.577 | 2.566 | 2.534 | 2.507 | 2.498 |
| 29 | 1.206 | 1.435 | 1.748 | 2.022 | 2.161 | 2.182 | 2.159 | 2.145 | 2.143 | 2.148 | 2.164 | 2.188 | 2.206 | 2.198 | 2.172 | 2.150 | 2.142 |
| 30 | 1.016 | 1.214 | 1.488 | 1.730 | 1.854 | 1.870 | 1.849 | 1.835 | 1.835 | 1.841 | 1.854 | 1.874 | 1.889 | 1.884 | 1.862 | 1.843 | 1.836 |
| 31 | 0.863 | 1.033 | 1.269 | 1.481 | 1.591 | 1.605 | 1.585 | 1.572 | 1.573 | 1.579 | 1.590 | 1.606 | 1.619 | 1.615 | 1.597 | 1.580 | 1.574 |
| 32 | 0.739 | 0.883 | 1.084 | 1.268 | 1.364 | 1.378 | 1.360 | 1.349 | 1.351 | 1.356 | 1.365 | 1.378 | 1.388 | 1.385 | 1.370 | 1.355 | 1.349 |
| 33 | 0.637 | 0.758 | 0.929 | 1.086 | 1.170 | 1.183 | 1.169 | 1.159 | 1.161 | 1.166 | 1.173 | 1.183 | 1.192 | 1.189 | 1.176 | 1.163 | 1.156 |
| 34 | 0.551 | 0.653 | 0.798 | 0.931 | 1.004 | 1.017 | 1.005 | 0.998 | 0.999 | 1.003 | 1.009 | 1.017 | 1.023 | 1.021 | 1.010 | 0.998 | 0.991 |
| 35 | 4.797 | 5.654 | 6.863 | 7.985 | 8.618 | 8.747 | 8.657 | 8.593 | 8.603 | 8.640 | 8.687 | 8.751 | 8.799 | 8.776 | 8.680 | 8.570 | 8.500 - 3 |
| 36 | 4.188 | 4.907 | 5.919 | 6.859 | 7.400 | 7.527 | 7.464 | 7.412 | 7.418 | 7.448 | 7.487 | 7.537 | 7.572 | 7.550 | 7.466 | 7.365 | 7.291 |
| 37 | 3.665 | 4.271 | 5.116 | 5.900 | 6.360 | 6.483 | 6.444 | 6.403 | 6.404 | 6.428 | 6.461 | 6.499 | 6.524 | 6.503 | 6.429 | 6.334 | 6.258 |
| 38 | 3.213 | 3.726 | 4.432 | 5.083 | 5.471 | 5.589 | 5.571 | 5.539 | 5.537 | 5.555 | 5.582 | 5.612 | 5.629 | 5.608 | 5.542 | 5.453 | 5.375 |
| 39 | 2.820 | 3.257 | 3.848 | 4.387 | 4.712 | 4.825 | 4.823 | 4.800 | 4.794 | 4.807 | 4.830 | 4.853 | 4.863 | 4.843 | 4.785 | 4.700 | 4.621 |
| 40 | 2.478 | 2.851 | 3.348 | 3.793 | 4.065 | 4.171 | 4.183 | 4.167 | 4.159 | 4.167 | 4.186 | 4.204 | 4.209 | 4.190 | 4.137 | 4.056 | 3.977 |
| 41 | 2.178 | 2.500 | 2.919 | 3.286 | 3.513 | 3.612 | 3.634 | 3.624 | 3.614 | 3.619 | 3.634 | 3.648 | 3.649 | 3.631 | 3.583 | 3.505 | 3.427 |
| 42 | 1.916 | 2.195 | 2.550 | 2.853 | 3.041 | 3.133 | 3.163 | 3.159 | 3.147 | 3.149 | 3.161 | 3.172 | 3.170 | 3.153 | 3.108 | 3.034 | 2.957 |
| 43 | 1.686 | 1.930 | 2.231 | 2.482 | 2.639 | 2.723 | 2.759 | 2.759 | 2.747 | 2.745 | 2.755 | 2.763 | 2.760 | 2.743 | 2.702 | 2.631 | 2.556 |
| 44 | 1.485 | 1.698 | 1.956 | 2.164 | 2.295 | 2.372 | 2.411 | 2.415 | 2.403 | 2.399 | 2.406 | 2.411 | 2.407 | 2.391 | 2.353 | 2.286 | 2.212 |
| 45 | 1.308 | 1.496 | 1.717 | 1.890 | 2.000 | 2.071 | 2.112 | 2.119 | 2.107 | 2.102 | 2.106 | 2.109 | 2.104 | 2.089 | 2.054 | 1.989 | 1.919 |
| 46 | 1.154 | 1.319 | 1.509 | 1.655 | 1.747 | 1.813 | 1.854 | 1.863 | 1.852 | 1.845 | 1.848 | 1.849 | 1.843 | 1.829 | 1.796 | 1.734 | 1.667 |
| 47 | 1.019 | 1.164 | 1.329 | 1.451 | 1.530 | 1.590 | 1.631 | 1.642 | 1.632 | 1.624 | 1.624 | 1.623 | 1.618 | 1.605 | 1.574 | 1.515 | 1.451 |
| 48 | 0.900 | 1.028 | 1.171 | 1.275 | 1.343 | 1.397 | 1.437 | 1.449 | 1.441 | 1.432 | 1.430 | 1.428 | 1.423 | 1.411 | 1.381 | 1.326 | 1.265 |
| 49 | 0.797 | 0.909 | 1.032 | 1.122 | 1.180 | 1.230 | 1.269 | 1.282 | 1.275 | 1.265 | 1.262 | 1.259 | 1.254 | 1.243 | 1.215 | 1.162 | 1.106 |
| 50 | 0.706 | 0.804 | 0.911 | 0.988 | 1.040 | 1.086 | 1.123 | 1.136 | 1.129 | 1.120 | 1.115 | 1.111 | 1.106 | 1.096 | 1.070 | 1.021 | 0.968 |
| 51 | 0.627 | 0.712 | 0.804 | 0.871 | 0.917 | 0.959 | 0.994 | 1.008 | 1.002 | 0.992 | 0.986 | 0.982 | 0.978 | 0.968 | 0.944 | 0.897 | 0.848 |
| 52 | 5.573 | 6.306 | 7.102 | 7.682 | 8.095 | 8.486 | 8.817 | 8.954 | 8.905 | 8.805 | 8.736 | 8.692 | 8.650 | 8.565 | 8.331 | 7.902 | 7.450 - 4 |
| 53 | 4.960 | 5.588 | 6.273 | 6.778 | 7.151 | 7.514 | 7.825 | 7.959 | 7.916 | 7.817 | 7.743 | 7.697 | 7.659 | 7.582 | 7.363 | 6.965 | 6.551 |
| 54 | 4.418 | 4.954 | 5.539 | 5.981 | 6.320 | 6.656 | 6.947 | 7.077 | 7.040 | 6.943 | 6.865 | 6.819 | 6.786 | 6.714 | 6.510 | 6.144 | 5.768 |
| 55 | 3.939 | 4.392 | 4.890 | 5.276 | 5.584 | 5.896 | 6.168 | 6.292 | 6.260 | 6.166 | 6.088 | 6.042 | 6.013 | 5.947 | 5.758 | 5.424 | 5.083 |
| 56 | 3.512 | 3.894 | 4.315 | 4.651 | 4.932 | 5.222 | 5.474 | 5.592 | 5.564 | 5.474 | 5.396 | 5.352 | 5.327 | 5.267 | 5.093 | 4.789 | 4.484 |
| 57 | 3.132 | 3.450 | 3.805 | 4.097 | 4.353 | 4.621 | 4.856 | 4.966 | 4.941 | 4.855 | 4.781 | 4.740 | 4.717 | 4.662 | 4.503 | 4.230 | 3.957 |
| 58 | 2.792 | 3.056 | 3.353 | 3.605 | 3.837 | 4.085 | 4.303 | 4.406 | 4.383 | 4.302 | 4.232 | 4.194 | 4.174 | 4.124 | 3.979 | 3.735 | 3.493 |
| 59 | 2.487 | 2.705 | 2.951 | 3.168 | 3.378 | 3.607 | 3.808 | 3.903 | 3.882 | 3.807 | 3.742 | 3.708 | 3.690 | 3.643 | 3.513 | 3.297 | 3.085 |
| 60 | 2.213 | 2.391 | 2.595 | 2.781 | 2.970 | 3.180 | 3.365 | 3.453 | 3.433 | 3.364 | 3.305 | 3.274 | 3.257 | 3.215 | 3.099 | 2.908 | 2.723 |
| 61 | 1.966 | 2.112 | 2.279 | 2.437 | 2.606 | 2.799 | 2.969 | 3.049 | 3.030 | 2.968 | 2.915 | 2.887 | 2.871 | 2.832 | 2.729 | 2.564 | 2.404 |
| 62 | 1.743 | 1.862 | 2.000 | 2.133 | 2.283 | 2.459 | 2.615 | 2.687 | 2.670 | 2.614 | 2.567 | 2.542 | 2.527 | 2.490 | 2.401 | 2.258 | 2.121 |
| 63 | 1.542 | 1.639 | 1.752 | 1.864 | 1.997 | 2.157 | 2.298 | 2.363 | 2.348 | 2.299 | 2.257 | 2.235 | 2.220 | 2.186 | 2.108 | 1.986 | 1.869 |
| 64 | 1.362 | 1.441 | 1.532 | 1.627 | 1.744 | 1.888 | 2.016 | 2.075 | 2.061 | 2.018 | 1.982 | 1.962 | 1.946 | 1.915 | 1.848 | 1.746 | 1.647 |
| 65 | 1.199 | 1.264 | 1.339 | 1.418 | 1.520 | 1.650 | 1.765 | 1.818 | 1.805 | 1.768 | 1.738 | 1.719 | 1.703 | 1.674 | 1.618 | 1.532 | 1.449 |
| 66 | 1.054 | 1.107 | 1.168 | 1.234 | 1.324 | 1.439 | 1.542 | 1.589 | 1.579 | 1.547 | 1.522 | 1.504 | 1.487 | 1.461 | 1.413 | 1.342 | 1.274 |
| 67 | 0.924 | 0.968 | 1.017 | 1.073 | 1.151 | 1.254 | 1.345 | 1.387 | 1.378 | 1.352 | 1.331 | 1.314 | 1.296 | 1.272 | 1.232 | 1.175 | 1.118 |
| 68 | 0.808 | 0.844 | 0.885 | 0.932 | 1.000 | 1.091 | 1.171 | 1.208 | 1.201 | 1.180 | 1.162 | 1.146 | 1.128 | 1.106 | 1.073 | 1.026 | 0.981 |
| 69 | 0.705 | 0.735 | 0.769 | 0.809 | 0.869 | 0.948 | 1.018 | 1.050 | 1.045 | 1.029 | 1.014 | 0.998 | 0.979 | 0.959 | 0.932 | 0.895 | 0.858 |
| 70 | 6.140 | 6.390 | 6.672 | 7.013 | 7.536 | 8.228 | 8.838 | 9.111 | 9.084 | 8.959 | 8.830 | 8.675 | 8.488 | 8.302 | 8.089 | 7.798 | 7.501 - 5 |
| 71 | 5.340 | 5.546 | 5.783 | 6.079 | 6.536 | 7.136 | 7.658 | 7.892 | 7.880 | 7.790 | 7.683 | 7.530 | 7.344 | 7.174 | 7.006 | 6.780 | 6.543 |
| 72 | 4.636 | 4.807 | 5.007 | 5.266 | 5.666 | 6.183 | 6.625 | 6.823 | 6.824 | 6.764 | 6.675 | 6.526 | 6.342 | 6.189 | 6.057 | 5.884 | 5.696 |
| 73 | 4.019 | 4.160 | 4.331 | 4.559 | 4.910 | 5.353 | 5.722 | 5.886 | 5.897 | 5.862 | 5.790 | 5.645 | 5.466 | 5.329 | 5.227 | 5.097 | 4.947 |
| 74 | 3.480 | 3.596 | 3.743 | 3.945 | 4.252 | 4.628 | 4.932 | 5.066 | 5.084 | 5.069 | 5.011 | 4.873 | 4.703 | 4.580 | 4.503 | 4.405 | 4.285 |
| 75 | 3.009 | 3.106 | 3.232 | 3.411 | 3.678 | 3.996 | 4.243 | 4.349 | 4.369 | 4.371 | 4.326 | 4.198 | 4.038 | 3.929 | 3.871 | 3.798 | 3.702 |
| 76 | 2.597 | 2.679 | 2.789 | 2.946 | 3.177 | 3.443 | 3.641 | 3.721 | 3.741 | 3.754 | 3.722 | 3.606 | 3.459 | 3.363 | 3.320 | 3.266 | 3.187 |
| 77 | 2.236 | 2.309 | 2.406 | 2.541 | 2.738 | 2.958 | 3.114 | 3.172 | 3.189 | 3.209 | 3.190 | 3.088 | 2.955 | 2.872 | 2.841 | 2.800 | 2.733 |
| 78 | 1.921 | 1.989 | 2.074 | 2.188 | 2.352 | 2.533 | 2.654 | 2.691 | 2.702 | 2.727 | 2.719 | 2.634 | 2.517 | 2.446 | 2.424 | 2.392 | 2.334 |
| 79 | 1.644 | 1.711 | 1.787 | 1.880 | 2.012 | 2.159 | 2.252 | 2.271 | 2.274 | 2.300 | 2.304 | 2.237 | 2.137 | 2.077 | 2.061 | 2.036 | 1.984 |
| 80 | 1.399 | 1.470 | 1.539 | 1.609 | 1.711 | 1.829 | 1.899 | 1.903 | 1.897 | 1.922 | 1.937 | 1.889 | 1.807 | 1.757 | 1.746 | 1.725 | 1.677 |

46

ZONAL MEAN DENSITY (KG/M CU)

| KM | LAT = -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.102 | 1.085? | 1.095 | 1.149 | 1.222 | 1.289 | 1.322 | 1.336 | 1.342 | 1.339 | 1.322 | 1.290 | 1.245 | 1.191 | 1.143 | 1.110 | 1.096 | - 1 |
| 19 | 0.941 | 0.931 | 0.941 | 0.985 | 1.046 | 1.092 | 1.114 | 1.122 | 1.126 | 1.127 | 1.112 | 1.095 | 1.062 | 1.021 | 0.983 | 0.957 | 0.945 | |
| 20 | 7.900 | 7.903 | 8.065 | 8.451 | 8.916 | 9.246 | 9.383 | 9.425 | 9.452 | 9.464 | 9.417 | 9.278 | 9.041 | 8.735 | 8.439 | 8.230 | 8.129 | - 2 |
| 21 | 6.563 | 6.668 | 6.896 | 7.249 | 7.607 | 7.830 | 7.907 | 7.922 | 7.938 | 7.951 | 7.932 | 7.852 | 7.693 | 7.469 | 7.237 | 7.065 | 6.977 | |
| 22 | 5.423 | 5.605 | 5.887 | 6.219 | 6.495 | 6.638 | 6.671 | 6.669 | 6.676 | 6.688 | 6.686 | 6.647 | 6.546 | 6.385 | 6.203 | 6.059 | 5.982 | |
| 23 | 4.471 | 4.704 | 5.020 | 5.333 | 5.549 | 5.635 | 5.639 | 5.626 | 5.626 | 5.636 | 5.645 | 5.632 | 5.573 | 5.457 | 5.314 | 5.194 | 5.125 | |
| 24 | 3.689 | 3.947 | 4.279 | 4.573 | 4.744 | 4.791 | 4.777 | 4.757 | 4.753 | 4.761 | 4.775 | 4.780 | 4.748 | 4.664 | 4.551 | 4.450 | 4.388 | |
| 25 | 3.051 | 3.315 | 3.646 | 3.919 | 4.058 | 4.080 | 4.055 | 4.032 | 4.025 | 4.032 | 4.049 | 4.064 | 4.048 | 3.987 | 3.896 | 3.810 | 3.755 | |
| 26 | 2.533 | 2.790 | 3.108 | 3.357 | 3.471 | 3.479 | 3.449 | 3.425 | 3.416 | 3.423 | 3.442 | 3.460 | 3.454 | 3.408 | 3.334 | 3.261 | 3.211 | |
| 27 | 2.112 | 2.355 | 2.650 | 2.875 | 2.971 | 2.971 | 2.940 | 2.915 | 2.906 | 2.913 | 2.932 | 2.951 | 2.949 | 2.913 | 2.852 | 2.789 | 2.744 | |
| 28 | 1.771 | 1.993 | 2.261 | 2.461 | 2.542 | 2.540 | 2.510 | 2.487 | 2.478 | 2.484 | 2.503 | 2.521 | 2.519 | 2.490 | 2.439 | 2.384 | 2.342 | |
| 29 | 1.493 | 1.692 | 1.930 | 2.106 | 2.176 | 2.173 | 2.142 | 2.125 | 2.117 | 2.123 | 2.141 | 2.156 | 2.153 | 2.128 | 2.085 | 2.036 | 1.997 | |
| 30 | 1.266 | 1.441 | 1.650 | 1.802 | 1.862 | 1.861 | 1.839 | 1.819 | 1.812 | 1.818 | 1.834 | 1.846 | 1.842 | 1.818 | 1.781 | 1.737 | 1.700 | |
| 31 | 1.079 | 1.232 | 1.412 | 1.542 | 1.594 | 1.595 | 1.577 | 1.560 | 1.553 | 1.559 | 1.573 | 1.582 | 1.576 | 1.554 | 1.521 | 1.481 | 1.446 | |
| 32 | 0.925 | 1.056 | 1.210 | 1.320 | 1.365 | 1.368 | 1.354 | 1.340 | 1.333 | 1.340 | 1.352 | 1.357 | 1.349 | 1.328 | 1.298 | 1.262 | 1.228 | |
| 33 | 0.797 | 0.909 | 1.039 | 1.131 | 1.170 | 1.174 | 1.164 | 1.152 | 1.147 | 1.152 | 1.162 | 1.165 | 1.155 | 1.135 | 1.108 | 1.074 | 1.042 | |
| 34 | 0.689 | 0.784 | 0.893 | 0.969 | 1.003 | 1.008 | 1.002 | 0.992 | 0.988 | 0.993 | 1.001 | 1.001 | 0.990 | 0.971 | 0.946 | 0.914 | 0.884 | |
| 35 | 5.989 | 6.788 | 7.690 | 8.320 | 8.602 | 8.670 | 8.632 | 8.554 | 8.517 | 8.562 | 8.627 | 8.610 | 8.488 | 8.308 | 8.077 | 7.780 | 7.490 | - 3 |
| 36 | 5.222 | 5.891 | 6.636 | 7.149 | 7.387 | 7.462 | 7.448 | 7.388 | 7.356 | 7.395 | 7.444 | 7.411 | 7.286 | 7.115 | 6.900 | 6.620 | 6.345 | |
| 37 | 4.569 | 5.127 | 5.732 | 6.152 | 6.352 | 6.431 | 6.434 | 6.390 | 6.364 | 6.395 | 6.430 | 6.387 | 6.261 | 6.099 | 5.899 | 5.635 | 5.375 | |
| 38 | 4.008 | 4.473 | 4.971 | 5.304 | 5.471 | 5.550 | 5.567 | 5.536 | 5.514 | 5.539 | 5.562 | 5.510 | 5.386 | 5.234 | 5.048 | 4.800 | 4.555 | |
| 39 | 3.525 | 3.911 | 4.316 | 4.581 | 4.720 | 4.798 | 4.825 | 4.804 | 4.786 | 4.805 | 4.817 | 4.761 | 4.641 | 4.499 | 4.324 | 4.092 | 3.862 | |
| 40 | 3.107 | 3.427 | 3.755 | 3.966 | 4.080 | 4.155 | 4.189 | 4.177 | 4.161 | 4.175 | 4.179 | 4.119 | 4.005 | 3.873 | 3.710 | 3.492 | 3.279 | |
| 41 | 2.743 | 3.009 | 3.275 | 3.441 | 3.534 | 3.605 | 3.644 | 3.638 | 3.625 | 3.634 | 3.631 | 3.570 | 3.462 | 3.340 | 3.189 | 2.985 | 2.787 | |
| 42 | 2.426 | 2.647 | 2.862 | 2.992 | 3.069 | 3.135 | 3.176 | 3.175 | 3.164 | 3.169 | 3.160 | 3.100 | 2.999 | 2.886 | 2.745 | 2.556 | 2.373 | |
| 43 | 2.149 | 2.332 | 2.506 | 2.608 | 2.671 | 2.732 | 2.773 | 2.777 | 2.768 | 2.769 | 2.756 | 2.697 | 2.604 | 2.500 | 2.369 | 2.193 | 2.024 | |
| 44 | 1.905 | 2.058 | 2.199 | 2.279 | 2.331 | 2.386 | 2.427 | 2.434 | 2.426 | 2.424 | 2.408 | 2.351 | 2.265 | 2.170 | 2.048 | 1.885 | 1.731 | |
| 45 | 1.692 | 1.819 | 1.934 | 1.996 | 2.039 | 2.089 | 2.129 | 2.137 | 2.131 | 2.126 | 2.108 | 2.054 | 1.975 | 1.888 | 1.775 | 1.625 | 1.483 | |
| 46 | 1.503 | 1.610 | 1.703 | 1.752 | 1.788 | 1.834 | 1.871 | 1.881 | 1.875 | 1.869 | 1.849 | 1.798 | 1.726 | 1.646 | 1.542 | 1.403 | 1.275 | |
| 47 | 1.337 | 1.426 | 1.502 | 1.541 | 1.571 | 1.613 | 1.648 | 1.659 | 1.653 | 1.646 | 1.626 | 1.578 | 1.512 | 1.439 | 1.342 | 1.215 | 1.099 | |
| 48 | 1.190 | 1.265 | 1.327 | 1.359 | 1.384 | 1.422 | 1.455 | 1.465 | 1.461 | 1.453 | 1.432 | 1.387 | 1.328 | 1.260 | 1.171 | 1.055 | 0.950 | |
| 49 | 1.059 | 1.122 | 1.174 | 1.200 | 1.222 | 1.255 | 1.286 | 1.296 | 1.293 | 1.284 | 1.264 | 1.222 | 1.168 | 1.106 | 1.024 | 0.918 | 0.823 | |
| 50 | 0.944 | 0.997 | 1.039 | 1.061 | 1.080 | 1.110 | 1.138 | 1.149 | 1.146 | 1.137 | 1.117 | 1.079 | 1.029 | 0.973 | 0.897 | 0.801 | 0.716 | |
| 51 | 0.841 | 0.885 | 0.921 | 0.939 | 0.956 | 0.983 | 1.009 | 1.019 | 1.017 | 1.008 | 0.989 | 0.954 | 0.909 | 0.857 | 0.788 | 0.700 | 0.624 | |
| 52 | 7.495 | 7.865 | 8.164 | 8.315 | 8.470 | 8.717 | 8.951 | 9.050 | 9.030 | 8.945 | 8.760 | 8.440 | 8.033 | 7.558 | 6.923 | 6.136 | 5.452 | - 4 |
| 53 | 6.680 | 6.989 | 7.238 | 7.369 | 7.510 | 7.732 | 7.946 | 8.041 | 8.026 | 7.944 | 7.769 | 7.477 | 7.109 | 6.673 | 6.093 | 5.384 | 4.776 | |
| 54 | 5.953 | 6.209 | 6.416 | 6.532 | 6.660 | 6.861 | 7.055 | 7.146 | 7.135 | 7.057 | 6.894 | 6.628 | 6.294 | 5.895 | 5.367 | 4.731 | 4.193 | |
| 55 | 5.304 | 5.514 | 5.687 | 5.788 | 5.906 | 6.087 | 6.264 | 6.350 | 6.344 | 6.271 | 6.119 | 5.878 | 5.575 | 5.210 | 4.730 | 4.162 | 3.687 | |
| 56 | 4.722 | 4.894 | 5.037 | 5.127 | 5.235 | 5.398 | 5.559 | 5.641 | 5.638 | 5.570 | 5.430 | 5.212 | 4.938 | 4.604 | 4.169 | 3.664 | 3.246 | |
| 57 | 4.202 | 4.340 | 4.458 | 4.537 | 4.636 | 4.784 | 4.930 | 5.008 | 5.007 | 4.945 | 4.816 | 4.619 | 4.371 | 4.067 | 3.675 | 3.227 | 2.862 | |
| 58 | 3.735 | 3.846 | 3.943 | 4.012 | 4.102 | 4.235 | 4.367 | 4.441 | 4.443 | 4.386 | 4.268 | 4.091 | 3.867 | 3.590 | 3.237 | 2.843 | 2.524 | |
| 59 | 3.317 | 3.405 | 3.483 | 3.543 | 3.625 | 3.745 | 3.865 | 3.933 | 3.937 | 3.885 | 3.779 | 3.620 | 3.417 | 3.166 | 2.850 | 2.503 | 2.227 | |
| 60 | 2.942 | 3.011 | 3.073 | 3.125 | 3.199 | 3.307 | 3.415 | 3.479 | 3.484 | 3.437 | 3.341 | 3.199 | 3.016 | 2.788 | 2.507 | 2.204 | 1.965 | |
| 61 | 2.606 | 2.659 | 2.708 | 2.752 | 2.819 | 2.916 | 3.013 | 3.072 | 3.077 | 3.036 | 2.950 | 2.823 | 2.658 | 2.452 | 2.202 | 1.938 | 1.733 | |
| 62 | 2.305 | 2.345 | 2.383 | 2.420 | 2.480 | 2.567 | 2.654 | 2.707 | 2.713 | 2.676 | 2.600 | 2.487 | 2.338 | 2.153 | 1.932 | 1.703 | 1.528 | |
| 63 | 2.035 | 2.065 | 2.094 | 2.126 | 2.178 | 2.256 | 2.334 | 2.382 | 2.387 | 2.355 | 2.288 | 2.187 | 2.053 | 1.887 | 1.692 | 1.495 | 1.346 | |
| 64 | 1.794 | 1.816 | 1.838 | 1.864 | 1.910 | 1.980 | 2.049 | 2.091 | 2.096 | 2.068 | 2.010 | 1.920 | 1.799 | 1.650 | 1.480 | 1.311 | 1.184 | |
| 65 | 1.579 | 1.595 | 1.611 | 1.632 | 1.673 | 1.735 | 1.796 | 1.833 | 1.836 | 1.813 | 1.762 | 1.682 | 1.573 | 1.441 | 1.293 | 1.148 | 1.041 | |
| 66 | 1.387 | 1.399 | 1.410 | 1.427 | 1.463 | 1.518 | 1.572 | 1.603 | 1.605 | 1.586 | 1.542 | 1.471 | 1.373 | 1.255 | 1.127 | 1.004 | 0.914 | |
| 67 | 1.217 | 1.225 | 1.233 | 1.246 | 1.278 | 1.327 | 1.374 | 1.399 | 1.400 | 1.384 | 1.348 | 1.284 | 1.196 | 1.092 | 0.981 | 0.877 | 0.802 | |
| 68 | 1.065 | 1.072 | 1.077 | 1.088 | 1.116 | 1.159 | 1.199 | 1.218 | 1.219 | 1.206 | 1.175 | 1.120 | 1.040 | 0.948 | 0.853 | 0.766 | 0.702 | |
| 69 | 0.931 | 0.936 | 0.939 | 0.948 | 0.973 | 1.011 | 1.044 | 1.059 | 1.058 | 1.048 | 1.023 | 0.974 | 0.903 | 0.822 | 0.741 | 0.667 | 0.614 | |
| 70 | 8.132 | 8.170 | 8.186 | 8.254 | 8.472 | 8.807 | 9.085 | 9.187 | 9.166 | 9.094 | 8.896 | 8.463 | 7.824 | 7.113 | 6.424 | 5.810 | 5.364 | - 5 |
| 71 | 7.090 | 7.121 | 7.128 | 7.181 | 7.374 | 7.667 | 7.893 | 7.953 | 7.922 | 7.874 | 7.720 | 7.340 | 6.769 | 6.147 | 5.564 | 5.053 | 4.680 | |
| 72 | 6.173 | 6.200 | 6.200 | 6.242 | 6.412 | 6.667 | 6.845 | 6.869 | 6.831 | 6.803 | 6.687 | 6.356 | 5.846 | 5.305 | 4.815 | 4.390 | 4.078 | |
| 73 | 5.368 | 5.392 | 5.388 | 5.421 | 5.570 | 5.789 | 5.926 | 5.919 | 5.875 | 5.864 | 5.782 | 5.495 | 5.041 | 4.572 | 4.161 | 3.810 | 3.549 | |
| 74 | 4.663 | 4.685 | 4.678 | 4.703 | 4.832 | 5.018 | 5.118 | 5.087 | 5.039 | 5.042 | 4.988 | 4.741 | 4.340 | 3.935 | 3.593 | 3.303 | 3.083 | |
| 75 | 4.045 | 4.066 | 4.057 | 4.074 | 4.184 | 4.340 | 4.409 | 4.340 | 4.309 | 4.323 | 4.292 | 4.082 | 3.730 | 3.382 | 3.098 | 2.859 | 2.674 | |
| 76 | 3.503 | 3.524 | 3.513 | 3.523 | 3.615 | 3.743 | 3.785 | 3.723 | 3.673 | 3.694 | 3.683 | 3.505 | 3.200 | 2.902 | 2.668 | 2.471 | 2.314 | |
| 77 | 3.030 | 3.050 | 3.038 | 3.040 | 3.114 | 3.216 | 3.237 | 3.167 | 3.119 | 3.146 | 3.148 | 3.001 | 2.738 | 2.486 | 2.293 | 2.130 | 1.997 | |
| 78 | 2.616 | 2.635 | 2.622 | 2.616 | 2.671 | 2.749 | 2.755 | 2.682 | 2.637 | 2.667 | 2.680 | 2.560 | 2.337 | 2.126 | 1.967 | 1.832 | 1.717 | |
| 79 | 2.253 | 2.272 | 2.258 | 2.244 | 2.281 | 2.337 | 2.330 | 2.259 | 2.218 | 2.249 | 2.269 | 2.174 | 1.988 | 1.813 | 1.682 | 1.569 | 1.471 | |
| 80 | 1.936 | 1.954 | 1.938 | 1.917 | 1.935 | 1.971 | 1.956 | 1.891 | 1.855 | 1.885 | 1.909 | 1.836 | 1.684 | 1.541 | 1.434 | 1.338 | 1.253 | |

ZONAL MEAN DENSITY (KG/M CU)

| KM | LAT = -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.032 | 1.082 | 1.146 | 1.222 | 1.296 | 1.350 | 1.372 | 1.369 | 1.363 | 1.360 | 1.343 | 1.299 | 1.236 | 1.181 | 1.144 | 1.120 | 1.102 | - 1 |
| 19 | 0.895 | 0.933 | 0.986 | 1.044 | 1.099 | 1.137 | 1.150 | 1.146 | 1.141 | 1.142 | 1.133 | 1.102 | 1.055 | 1.012 | 0.983 | 0.963 | 0.949 | |
| 20 | 7.687 | 8.015 | 8.456 | 8.920 | 9.323 | 9.576 | 9.640 | 9.592 | 9.560 | 9.576 | 9.533 | 9.322 | 8.986 | 8.663 | 8.429 | 8.263 | 8.142 | - 2 |
| 21 | 6.590 | 6.872 | 7.245 | 7.615 | 7.908 | 8.067 | 8.088 | 8.040 | 8.016 | 8.034 | 8.015 | 7.879 | 7.645 | 7.403 | 7.213 | 7.070 | 6.969 | |
| 22 | 5.642 | 5.884 | 6.200 | 6.497 | 6.708 | 6.802 | 6.796 | 6.750 | 6.731 | 6.746 | 6.742 | 6.659 | 6.501 | 6.321 | 6.163 | 6.037 | 5.949 | |
| 23 | 4.828 | 5.036 | 5.302 | 5.543 | 5.693 | 5.742 | 5.720 | 5.678 | 5.661 | 5.673 | 5.672 | 5.632 | 5.529 | 5.394 | 5.260 | 5.146 | 5.065 | |
| 24 | 4.132 | 4.309 | 4.532 | 4.724 | 4.832 | 4.854 | 4.824 | 4.786 | 4.770 | 4.779 | 4.788 | 4.768 | 4.703 | 4.601 | 4.485 | 4.379 | 4.303 | |
| 25 | 3.538 | 3.688 | 3.874 | 4.027 | 4.104 | 4.109 | 4.078 | 4.043 | 4.028 | 4.034 | 4.046 | 4.042 | 4.002 | 3.923 | 3.821 | 3.721 | 3.647 | |
| 26 | 3.033 | 3.160 | 3.313 | 3.432 | 3.487 | 3.484 | 3.454 | 3.423 | 3.409 | 3.412 | 3.426 | 3.431 | 3.406 | 3.344 | 3.252 | 3.157 | 3.084 | |
| 27 | 2.602 | 2.709 | 2.834 | 2.927 | 2.965 | 2.958 | 2.931 | 2.905 | 2.891 | 2.893 | 2.907 | 2.916 | 2.901 | 2.848 | 2.766 | 2.675 | 2.602 | |
| 28 | 2.236 | 2.325 | 2.426 | 2.497 | 2.523 | 2.516 | 2.493 | 2.470 | 2.457 | 2.459 | 2.472 | 2.482 | 2.471 | 2.425 | 2.350 | 2.263 | 2.192 | |
| 29 | 1.924 | 1.999 | 2.079 | 2.132 | 2.149 | 2.142 | 2.124 | 2.105 | 2.093 | 2.094 | 2.106 | 2.116 | 2.105 | 2.064 | 1.995 | 1.913 | 1.844 | |
| 30 | 1.659 | 1.720 | 1.784 | 1.822 | 1.833 | 1.827 | 1.814 | 1.797 | 1.786 | 1.787 | 1.798 | 1.805 | 1.794 | 1.757 | 1.693 | 1.615 | 1.549 | |
| 31 | 1.432 | 1.483 | 1.532 | 1.557 | 1.565 | 1.561 | 1.551 | 1.537 | 1.528 | 1.529 | 1.538 | 1.542 | 1.530 | 1.494 | 1.435 | 1.363 | 1.301 | |
| 32 | 1.239 | 1.280 | 1.318 | 1.336 | 1.338 | 1.336 | 1.329 | 1.318 | 1.310 | 1.311 | 1.318 | 1.319 | 1.305 | 1.271 | 1.217 | 1.150 | 1.091 | |
| 33 | 1.073 | 1.107 | 1.136 | 1.146 | 1.146 | 1.145 | 1.141 | 1.132 | 1.125 | 1.126 | 1.131 | 1.130 | 1.113 | 1.081 | 1.031 | 0.969 | 0.915 | |
| 34 | 9.311 | 9.592 | 9.801 | 9.853 | 9.836 | 9.830 | 9.807 | 9.739 | 9.683 | 9.692 | 9.726 | 9.683 | 9.508 | 9.197 | 8.739 | 8.174 | 7.679 | - 3 |
| 35 | 8.094 | 8.323 | 8.474 | 8.486 | 8.456 | 8.455 | 8.447 | 8.396 | 8.350 | 8.359 | 8.376 | 8.311 | 8.126 | 7.829 | 7.409 | 6.896 | 6.447 | |
| 36 | 7.047 | 7.234 | 7.341 | 7.325 | 7.285 | 7.287 | 7.288 | 7.251 | 7.216 | 7.223 | 7.226 | 7.144 | 6.952 | 6.669 | 6.285 | 5.822 | 5.418 | |
| 37 | 6.142 | 6.299 | 6.372 | 6.336 | 6.290 | 6.293 | 6.301 | 6.274 | 6.248 | 6.253 | 6.244 | 6.148 | 5.955 | 5.686 | 5.336 | 4.921 | 4.560 | |
| 38 | 5.370 | 5.494 | 5.541 | 5.493 | 5.444 | 5.445 | 5.457 | 5.440 | 5.420 | 5.423 | 5.404 | 5.300 | 5.108 | 4.855 | 4.537 | 4.165 | 3.844 | |
| 39 | 4.700 | 4.801 | 4.829 | 4.774 | 4.722 | 4.722 | 4.736 | 4.725 | 4.711 | 4.712 | 4.685 | 4.576 | 4.388 | 4.151 | 3.862 | 3.531 | 3.242 | |
| 40 | 4.120 | 4.203 | 4.217 | 4.158 | 4.106 | 4.105 | 4.118 | 4.112 | 4.102 | 4.101 | 4.069 | 3.958 | 3.772 | 3.556 | 3.294 | 3.000 | 2.750 | |
| 41 | 3.617 | 3.685 | 3.691 | 3.631 | 3.580 | 3.576 | 3.588 | 3.585 | 3.579 | 3.577 | 3.541 | 3.430 | 3.251 | 3.052 | 2.816 | 2.554 | 2.335 | |
| 42 | 3.181 | 3.237 | 3.237 | 3.178 | 3.128 | 3.123 | 3.133 | 3.132 | 3.128 | 3.124 | 3.086 | 2.979 | 2.815 | 2.625 | 2.412 | 2.180 | 1.988 | |
| 43 | 2.802 | 2.849 | 2.844 | 2.788 | 2.741 | 2.733 | 2.741 | 2.741 | 2.738 | 2.734 | 2.695 | 2.592 | 2.438 | 2.264 | 2.071 | 1.866 | 1.698 | |
| 44 | 2.472 | 2.511 | 2.504 | 2.452 | 2.407 | 2.397 | 2.404 | 2.404 | 2.402 | 2.397 | 2.358 | 2.260 | 2.117 | 1.957 | 1.783 | 1.602 | 1.456 | |
| 45 | 2.184 | 2.217 | 2.209 | 2.160 | 2.116 | 2.108 | 2.112 | 2.112 | 2.110 | 2.105 | 2.067 | 1.975 | 1.843 | 1.696 | 1.539 | 1.380 | 1.252 | |
| 46 | 1.933 | 1.961 | 1.952 | 1.908 | 1.859 | 1.857 | 1.859 | 1.858 | 1.857 | 1.851 | 1.816 | 1.730 | 1.608 | 1.473 | 1.333 | 1.192 | 1.080 | |
| 47 | 1.713 | 1.736 | 1.728 | 1.687 | 1.652 | 1.639 | 1.639 | 1.638 | 1.636 | 1.630 | 1.597 | 1.518 | 1.406 | 1.283 | 1.157 | 1.033 | 0.935 | |
| 48 | 1.520 | 1.540 | 1.531 | 1.495 | 1.462 | 1.450 | 1.448 | 1.446 | 1.444 | 1.439 | 1.407 | 1.335 | 1.232 | 1.120 | 1.007 | 0.892 | 0.812 | |
| 49 | 1.350 | 1.367 | 1.359 | 1.327 | 1.297 | 1.284 | 1.281 | 1.278 | 1.276 | 1.270 | 1.242 | 1.176 | 1.082 | 0.980 | 0.879 | 0.782 | 0.708 | |
| 50 | 1.201 | 1.216 | 1.208 | 1.179 | 1.151 | 1.139 | 1.135 | 1.131 | 1.128 | 1.123 | 1.098 | 1.037 | 0.952 | 0.860 | 0.769 | 0.684 | 0.619 | |
| 51 | 1.069 | 1.082 | 1.075 | 1.048 | 1.023 | 1.011 | 1.026 | 1.002 | 0.999 | 0.994 | 0.971 | 0.917 | 0.839 | 0.755 | 0.674 | 0.599 | 0.543 | |
| 52 | 9.525 | 9.633 | 9.566 | 9.329 | 9.102 | 8.987 | 8.931 | 8.880 | 8.851 | 8.810 | 8.601 | 8.106 | 7.401 | 6.647 | 5.921 | 5.259 | 4.767 | - 4 |
| 53 | 8.493 | 8.584 | 8.519 | 8.306 | 8.100 | 7.990 | 7.929 | 7.876 | 7.846 | 7.810 | 7.623 | 7.175 | 6.536 | 5.856 | 5.209 | 4.627 | 4.198 | |
| 54 | 7.577 | 7.652 | 7.590 | 7.396 | 7.210 | 7.104 | 7.042 | 6.987 | 6.959 | 6.922 | 6.759 | 6.354 | 5.776 | 5.163 | 4.587 | 4.076 | 3.703 | |
| 55 | 6.762 | 6.822 | 6.762 | 6.586 | 6.416 | 6.316 | 6.253 | 6.200 | 6.173 | 6.145 | 5.994 | 5.628 | 5.105 | 4.554 | 4.043 | 3.595 | 3.270 | |
| 56 | 6.035 | 6.083 | 6.023 | 5.863 | 5.708 | 5.614 | 5.552 | 5.500 | 5.476 | 5.451 | 5.315 | 4.984 | 4.511 | 4.018 | 3.565 | 3.173 | 2.890 | |
| 57 | 5.386 | 5.422 | 5.363 | 5.216 | 5.075 | 4.987 | 4.926 | 4.877 | 4.856 | 4.835 | 4.712 | 4.411 | 3.985 | 3.543 | 3.144 | 2.801 | 2.556 | |
| 58 | 4.806 | 4.831 | 4.772 | 4.638 | 4.509 | 4.426 | 4.367 | 4.322 | 4.304 | 4.286 | 4.174 | 3.901 | 3.517 | 3.123 | 2.771 | 2.473 | 2.260 | |
| 59 | 4.286 | 4.302 | 4.243 | 4.119 | 4.001 | 3.924 | 3.869 | 3.827 | 3.812 | 3.797 | 3.695 | 3.447 | 3.101 | 2.751 | 2.441 | 2.182 | 1.997 | |
| 60 | 3.820 | 3.827 | 3.768 | 3.654 | 3.547 | 3.474 | 3.423 | 3.385 | 3.373 | 3.361 | 3.267 | 3.042 | 2.731 | 2.420 | 2.149 | 1.924 | 1.764 | |
| 61 | 3.401 | 3.401 | 3.343 | 3.238 | 3.140 | 3.072 | 3.024 | 2.991 | 2.982 | 2.971 | 2.885 | 2.680 | 2.401 | 2.126 | 1.890 | 1.695 | 1.557 | |
| 62 | 3.025 | 3.019 | 2.961 | 2.865 | 2.775 | 2.713 | 2.669 | 2.639 | 2.632 | 2.623 | 2.545 | 2.358 | 2.108 | 1.866 | 1.660 | 1.491 | 1.372 | |
| 63 | 2.688 | 2.676 | 2.619 | 2.530 | 2.449 | 2.392 | 2.351 | 2.325 | 2.320 | 2.312 | 2.240 | 2.072 | 1.848 | 1.654 | 1.456 | 1.310 | 1.207 | |
| 64 | 2.385 | 2.369 | 2.313 | 2.231 | 2.158 | 2.106 | 2.068 | 2.045 | 2.041 | 2.035 | 1.969 | 1.817 | 1.617 | 1.430 | 1.275 | 1.150 | 1.061 | |
| 65 | 2.112 | 2.093 | 2.039 | 1.964 | 1.898 | 1.851 | 1.817 | 1.795 | 1.793 | 1.787 | 1.728 | 1.590 | 1.413 | 1.249 | 1.115 | 1.007 | 0.931 | |
| 66 | 1.868 | 1.847 | 1.794 | 1.726 | 1.662 | 1.625 | 1.593 | 1.573 | 1.571 | 1.566 | 1.513 | 1.390 | 1.233 | 1.089 | 0.974 | 0.881 | 0.815 | |
| 67 | 1.647 | 1.626 | 1.576 | 1.514 | 1.461 | 1.424 | 1.395 | 1.376 | 1.374 | 1.370 | 1.323 | 1.213 | 1.074 | 0.949 | 0.850 | 0.770 | 0.713 | |
| 68 | 1.453 | 1.430 | 1.382 | 1.325 | 1.278 | 1.245 | 1.219 | 1.201 | 1.199 | 1.195 | 1.154 | 1.056 | 0.934 | 0.825 | 0.740 | 0.672 | 0.622 | |
| 69 | 1.278 | 1.254 | 1.209 | 1.157 | 1.116 | 1.088 | 1.063 | 1.046 | 1.042 | 1.040 | 1.004 | 0.919 | 0.811 | 0.717 | 0.644 | 0.586 | 0.542 | |
| 70 | 1.122 | 1.099 | 1.056 | 1.009 | 0.973 | 0.948 | 0.926 | 0.909 | 0.904 | 0.903 | 0.872 | 0.798 | 0.704 | 0.623 | 0.560 | 0.510 | 0.472 | |
| 71 | 9.833 | 9.606 | 9.207 | 8.778 | 8.466 | 8.253 | 8.048 | 7.875 | 7.825 | 7.816 | 7.562 | 6.917 | 6.102 | 5.401 | 4.868 | 4.434 | 4.103 | - 5 |
| 72 | 8.597 | 8.382 | 8.010 | 7.621 | 7.349 | 7.168 | 6.980 | 6.808 | 6.749 | 6.746 | 6.539 | 5.987 | 5.283 | 4.680 | 4.226 | 3.852 | 3.562 | |
| 73 | 7.502 | 7.301 | 6.957 | 6.603 | 6.366 | 6.212 | 6.040 | 5.869 | 5.803 | 5.805 | 5.642 | 5.174 | 4.568 | 4.052 | 3.666 | 3.344 | 3.089 | |
| 74 | 6.532 | 6.348 | 6.030 | 5.708 | 5.500 | 5.370 | 5.212 | 5.044 | 4.973 | 4.979 | 4.854 | 4.463 | 3.945 | 3.505 | 3.178 | 2.900 | 2.675 | |
| 75 | 5.676 | 5.509 | 5.217 | 4.923 | 4.740 | 4.629 | 4.484 | 4.321 | 4.247 | 4.257 | 4.165 | 3.841 | 3.401 | 3.028 | 2.752 | 2.512 | 2.314 | |
| 76 | 4.921 | 4.772 | 4.505 | 4.237 | 4.073 | 3.976 | 3.844 | 3.688 | 3.614 | 3.626 | 3.563 | 3.298 | 2.927 | 2.612 | 2.379 | 2.174 | 1.999 | |
| 77 | 4.256 | 4.125 | 3.882 | 3.637 | 3.489 | 3.403 | 3.282 | 3.136 | 3.064 | 3.078 | 3.037 | 2.823 | 2.513 | 2.249 | 2.054 | 1.877 | 1.724 | |
| 78 | 3.672 | 3.558 | 3.339 | 3.114 | 2.978 | 2.899 | 2.789 | 2.655 | 2.588 | 2.603 | 2.579 | 2.408 | 2.151 | 1.932 | 1.769 | 1.618 | 1.484 | |
| 79 | 3.159 | 3.062 | 2.866 | 2.659 | 2.531 | 2.457 | 2.358 | 2.237 | 2.176 | 2.191 | 2.180 | 2.045 | 1.835 | 1.654 | 1.518 | 1.390 | 1.274 | |
| 80 | 2.710 | 2.627 | 2.453 | 2.264 | 2.142 | 2.070 | 1.980 | 1.874 | 1.821 | 1.836 | 1.833 | 1.727 | 1.557 | 1.409 | 1.298 | 1.190 | 1.090 | |

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1.097 | 1.112 | 1.157 | 1.222 | 1.301 | 1.363 | 1.386 | 1.379 | 1.362 | 1.362 | 1.345 | 1.296 | 1.226 | 1.166 | 1.132 | 1.117 | 1.109  - 1 |
| 19 | 0.947 | 0.962 | 0.994 | 1.043 | 1.099 | 1.141 | 1.155 | 1.149 | 1.143 | 1.143 | 1.134 | 1.099 | 1.047 | 1.000 | 0.972 | 0.958 | 0.951 |
| 20 | 8.160 | 8.287 | 8.531 | 8.893 | 9.291 | 9.577 | 9.659 | 9.609 | 9.577 | 9.597 | 9.544 | 9.297 | 8.906 | 8.540 | 8.308 | 8.185 | 8.114  - 2 |
| 21 | 7.031 | 7.132 | 7.318 | 7.584 | 7.864 | 8.053 | 8.096 | 8.054 | 8.034 | 8.057 | 8.027 | 7.850 | 7.561 | 7.280 | 7.085 | 6.964 | 6.883 |
| 22 | 6.057 | 6.134 | 6.275 | 6.468 | 6.662 | 6.784 | 6.802 | 6.765 | 6.750 | 6.770 | 6.751 | 6.626 | 6.416 | 6.201 | 6.033 | 5.908 | 5.813 |
| 23 | 5.217 | 5.276 | 5.379 | 5.516 | 5.647 | 5.725 | 5.727 | 5.694 | 5.681 | 5.695 | 5.682 | 5.595 | 5.445 | 5.281 | 5.133 | 5.000 | 4.889 |
| 24 | 4.495 | 4.537 | 4.610 | 4.705 | 4.794 | 4.839 | 4.832 | 4.802 | 4.789 | 4.797 | 4.788 | 4.729 | 4.625 | 4.499 | 4.365 | 4.223 | 4.100 |
| 25 | 3.874 | 3.903 | 3.952 | 4.015 | 4.071 | 4.097 | 4.085 | 4.058 | 4.045 | 4.047 | 4.040 | 4.002 | 3.931 | 3.835 | 3.710 | 3.562 | 3.429 |
| 26 | 3.340 | 3.358 | 3.389 | 3.428 | 3.462 | 3.473 | 3.459 | 3.436 | 3.422 | 3.421 | 3.416 | 3.392 | 3.345 | 3.270 | 3.153 | 3.001 | 2.863 |
| 27 | 2.881 | 2.891 | 2.908 | 2.929 | 2.947 | 2.949 | 2.935 | 2.914 | 2.901 | 2.897 | 2.893 | 2.879 | 2.849 | 2.789 | 2.678 | 2.527 | 2.388 |
| 28 | 2.482 | 2.491 | 2.497 | 2.505 | 2.511 | 2.509 | 2.495 | 2.476 | 2.464 | 2.458 | 2.455 | 2.447 | 2.429 | 2.379 | 2.275 | 2.126 | 1.990 |
| 29 | 2.148 | 2.148 | 2.146 | 2.145 | 2.143 | 2.137 | 2.124 | 2.108 | 2.097 | 2.091 | 2.087 | 2.084 | 2.072 | 2.029 | 1.931 | 1.789 | 1.659 |
| 30 | 1.857 | 1.853 | 1.846 | 1.839 | 1.832 | 1.824 | 1.812 | 1.798 | 1.788 | 1.782 | 1.779 | 1.777 | 1.768 | 1.731 | 1.639 | 1.505 | 1.384 |
| 31 | 1.607 | 1.601 | 1.590 | 1.579 | 1.569 | 1.560 | 1.549 | 1.537 | 1.528 | 1.522 | 1.519 | 1.517 | 1.511 | 1.476 | 1.391 | 1.266 | 1.155 |
| 32 | 1.393 | 1.385 | 1.372 | 1.357 | 1.346 | 1.336 | 1.326 | 1.316 | 1.308 | 1.303 | 1.299 | 1.298 | 1.291 | 1.259 | 1.180 | 1.066 | 0.966 |
| 33 | 1.208 | 1.199 | 1.185 | 1.169 | 1.156 | 1.147 | 1.138 | 1.129 | 1.122 | 1.117 | 1.114 | 1.111 | 1.104 | 1.074 | 1.001 | 0.899 | 0.809 |
| 34 | 1.049 | 1.040 | 1.025 | 1.009 | 0.996 | 0.986 | 0.978 | 0.971 | 0.965 | 0.961 | 0.957 | 0.953 | 0.945 | 0.915 | 0.850 | 0.758 | 0.678 |
| 35 | 9.116 | 9.032 | 8.888 | 8.723 | 8.589 | 8.497 | 8.424 | 8.359 | 8.311 | 8.275 | 8.237 | 8.191 | 8.092 | 7.808 | 7.212 | 6.400 | 5.705  - 3 |
| 36 | 7.936 | 7.855 | 7.716 | 7.557 | 7.426 | 7.337 | 7.270 | 7.213 | 7.173 | 7.143 | 7.105 | 7.048 | 6.937 | 6.663 | 6.124 | 5.412 | 4.809 |
| 37 | 6.918 | 6.843 | 6.712 | 6.560 | 6.434 | 6.349 | 6.286 | 6.237 | 6.204 | 6.179 | 6.141 | 6.075 | 5.954 | 5.689 | 5.205 | 4.583 | 4.064 |
| 38 | 6.039 | 5.970 | 5.849 | 5.706 | 5.587 | 5.505 | 5.446 | 5.402 | 5.375 | 5.355 | 5.318 | 5.246 | 5.116 | 4.862 | 4.428 | 3.888 | 3.444 |
| 39 | 5.279 | 5.218 | 5.107 | 4.974 | 4.862 | 4.783 | 4.728 | 4.688 | 4.666 | 4.650 | 4.614 | 4.538 | 4.403 | 4.160 | 3.771 | 3.305 | 2.926 |
| 40 | 4.623 | 4.568 | 4.467 | 4.345 | 4.240 | 4.165 | 4.113 | 4.076 | 4.058 | 4.045 | 4.011 | 3.933 | 3.795 | 3.564 | 3.217 | 2.815 | 2.493 |
| 41 | 4.054 | 4.006 | 3.915 | 3.803 | 3.705 | 3.634 | 3.584 | 3.550 | 3.534 | 3.525 | 3.494 | 3.416 | 3.278 | 3.059 | 2.749 | 2.403 | 2.131 |
| 42 | 3.561 | 3.519 | 3.438 | 3.336 | 3.245 | 3.178 | 3.130 | 3.098 | 3.084 | 3.077 | 3.049 | 2.973 | 2.837 | 2.630 | 2.354 | 2.056 | 1.826 |
| 43 | 3.133 | 3.096 | 3.024 | 2.932 | 2.847 | 2.784 | 2.738 | 2.707 | 2.695 | 2.691 | 2.665 | 2.592 | 2.460 | 2.266 | 2.020 | 1.763 | 1.569 |
| 44 | 2.761 | 2.729 | 2.665 | 2.581 | 2.503 | 2.444 | 2.400 | 2.370 | 2.359 | 2.356 | 2.334 | 2.265 | 2.139 | 1.957 | 1.737 | 1.516 | 1.352 |
| 45 | 2.437 | 2.410 | 2.353 | 2.277 | 2.205 | 2.149 | 2.107 | 2.078 | 2.067 | 2.066 | 2.048 | 1.984 | 1.863 | 1.695 | 1.497 | 1.307 | 1.168 |
| 46 | 2.154 | 2.131 | 2.081 | 2.012 | 1.946 | 1.893 | 1.852 | 1.825 | 1.814 | 1.815 | 1.799 | 1.740 | 1.627 | 1.471 | 1.294 | 1.129 | 1.011 |
| 47 | 1.908 | 1.889 | 1.843 | 1.780 | 1.719 | 1.670 | 1.631 | 1.605 | 1.594 | 1.596 | 1.584 | 1.530 | 1.424 | 1.280 | 1.121 | 0.978 | 0.878 |
| 48 | 1.692 | 1.674 | 1.634 | 1.578 | 1.522 | 1.476 | 1.439 | 1.413 | 1.403 | 1.405 | 1.396 | 1.347 | 1.249 | 1.116 | 0.974 | 0.849 | 0.764 |
| 49 | 1.502 | 1.487 | 1.452 | 1.400 | 1.349 | 1.306 | 1.271 | 1.246 | 1.236 | 1.238 | 1.232 | 1.188 | 1.098 | 0.975 | 0.848 | 0.739 | 0.666 |
| 50 | 1.336 | 1.323 | 1.291 | 1.244 | 1.197 | 1.157 | 1.124 | 1.099 | 1.090 | 1.093 | 1.088 | 1.049 | 0.966 | 0.854 | 0.740 | 0.645 | 0.582 |
| 51 | 1.190 | 1.178 | 1.149 | 1.106 | 1.063 | 1.026 | 0.995 | 0.971 | 0.962 | 0.965 | 0.962 | 0.928 | 0.851 | 0.749 | 0.647 | 0.564 | 0.510 |
| 52 | 1.060 | 1.050 | 1.023 | 0.985 | 0.945 | 0.911 | 0.881 | 0.859 | 0.851 | 0.853 | 0.851 | 0.821 | 0.751 | 0.659 | 0.567 | 0.493 | 0.447 |
| 53 | 9.463 | 9.369 | 9.124 | 8.767 | 8.404 | 8.088 | 7.814 | 7.601 | 7.513 | 7.546 | 7.540 | 7.265 | 6.633 | 5.793 | 4.974 | 4.329 | 3.926  - 4 |
| 54 | 8.452 | 8.364 | 8.139 | 7.811 | 7.478 | 7.188 | 6.932 | 6.732 | 6.648 | 6.679 | 6.680 | 6.433 | 5.858 | 5.100 | 4.370 | 3.803 | 3.452 |
| 55 | 7.555 | 7.472 | 7.263 | 6.961 | 6.656 | 6.390 | 6.152 | 5.964 | 5.885 | 5.916 | 5.920 | 5.695 | 5.173 | 4.491 | 3.843 | 3.345 | 3.039 |
| 56 | 6.756 | 6.677 | 6.482 | 6.203 | 5.925 | 5.681 | 5.462 | 5.286 | 5.213 | 5.242 | 5.246 | 5.040 | 4.566 | 3.955 | 3.382 | 2.945 | 2.678 |
| 57 | 6.044 | 5.968 | 5.785 | 5.528 | 5.273 | 5.050 | 4.848 | 4.686 | 4.618 | 4.645 | 4.648 | 4.458 | 4.027 | 3.482 | 2.976 | 2.594 | 2.361 |
| 58 | 5.409 | 5.334 | 5.161 | 4.924 | 4.691 | 4.488 | 4.303 | 4.154 | 4.093 | 4.117 | 4.117 | 3.939 | 3.548 | 3.063 | 2.620 | 2.286 | 2.083 |
| 59 | 4.839 | 4.767 | 4.604 | 4.383 | 4.171 | 3.987 | 3.817 | 3.682 | 3.627 | 3.649 | 3.645 | 3.477 | 3.122 | 2.692 | 2.305 | 2.015 | 1.838 |
| 60 | 4.329 | 4.258 | 4.103 | 3.900 | 3.706 | 3.538 | 3.385 | 3.262 | 3.213 | 3.234 | 3.225 | 3.065 | 2.742 | 2.363 | 2.027 | 1.776 | 1.622 |
| 61 | 3.871 | 3.801 | 3.655 | 3.466 | 3.289 | 3.138 | 2.998 | 2.888 | 2.846 | 2.864 | 2.850 | 2.698 | 2.405 | 2.072 | 1.781 | 1.565 | 1.430 |
| 62 | 3.459 | 3.391 | 3.252 | 3.077 | 2.916 | 2.779 | 2.653 | 2.555 | 2.519 | 2.535 | 2.517 | 2.371 | 2.106 | 1.813 | 1.564 | 1.378 | 1.261 |
| 63 | 3.088 | 3.021 | 2.890 | 2.728 | 2.581 | 2.458 | 2.345 | 2.258 | 2.228 | 2.242 | 2.220 | 2.080 | 1.840 | 1.585 | 1.371 | 1.212 | 1.111 |
| 64 | 2.754 | 2.689 | 2.565 | 2.415 | 2.281 | 2.170 | 2.070 | 1.993 | 1.968 | 1.980 | 1.955 | 1.822 | 1.605 | 1.383 | 1.201 | 1.066 | 0.979 |
| 65 | 2.454 | 2.391 | 2.273 | 2.134 | 2.012 | 1.913 | 1.823 | 1.756 | 1.736 | 1.747 | 1.719 | 1.594 | 1.398 | 1.205 | 1.051 | 0.936 | 0.861 |
| 66 | 2.182 | 2.122 | 2.011 | 1.883 | 1.772 | 1.682 | 1.603 | 1.545 | 1.529 | 1.539 | 1.509 | 1.391 | 1.216 | 1.049 | 0.919 | 0.821 | 0.756 |
| 67 | 1.938 | 1.880 | 1.776 | 1.657 | 1.557 | 1.477 | 1.407 | 1.356 | 1.344 | 1.353 | 1.323 | 1.213 | 1.056 | 0.912 | 0.802 | 0.720 | 0.663 |
| 68 | 1.718 | 1.662 | 1.565 | 1.456 | 1.364 | 1.293 | 1.231 | 1.188 | 1.178 | 1.186 | 1.157 | 1.056 | 0.916 | 0.792 | 0.699 | 0.630 | 0.581 |
| 69 | 1.519 | 1.467 | 1.377 | 1.276 | 1.192 | 1.129 | 1.075 | 1.038 | 1.031 | 1.038 | 1.010 | 0.918 | 0.794 | 0.687 | 0.609 | 0.550 | 0.508 |
| 70 | 1.341 | 1.292 | 1.208 | 1.115 | 1.040 | 0.983 | 0.936 | 0.904 | 0.899 | 0.906 | 0.880 | 0.796 | 0.688 | 0.596 | 0.530 | 0.480 | 0.443 |
| 71 | 1.180 | 1.135 | 1.057 | 0.972 | 0.904 | 0.854 | 0.813 | 0.786 | 0.782 | 0.788 | 0.764 | 0.690 | 0.595 | 0.517 | 0.461 | 0.419 | 0.386 |
| 72 | 1.037 | 0.994 | 0.923 | 0.845 | 0.783 | 0.739 | 0.704 | 0.680 | 0.677 | 0.683 | 0.662 | 0.597 | 0.515 | 0.448 | 0.401 | 0.364 | 0.336 |
| 73 | 9.077 | 8.689 | 8.030 | 7.318 | 6.767 | 6.382 | 6.076 | 5.873 | 5.849 | 5.902 | 5.722 | 5.156 | 4.447 | 3.878 | 3.484 | 3.167 | 2.913  - 5 |
| 74 | 7.924 | 7.571 | 6.969 | 6.321 | 5.828 | 5.491 | 5.228 | 5.052 | 5.031 | 5.079 | 4.928 | 4.445 | 3.839 | 3.357 | 3.023 | 2.749 | 2.524 |
| 75 | 6.896 | 6.576 | 6.029 | 5.443 | 5.002 | 4.709 | 4.484 | 4.331 | 4.311 | 4.354 | 4.231 | 3.823 | 3.310 | 2.903 | 2.621 | 2.383 | 2.185 |
| 76 | 5.980 | 5.693 | 5.198 | 4.671 | 4.279 | 4.026 | 3.833 | 3.699 | 3.678 | 3.716 | 3.618 | 3.280 | 2.850 | 2.508 | 2.269 | 2.063 | 1.888 |
| 77 | 5.166 | 4.910 | 4.467 | 3.994 | 3.648 | 3.430 | 3.265 | 3.148 | 3.125 | 3.158 | 3.083 | 2.806 | 2.448 | 2.162 | 1.960 | 1.783 | 1.631 |
| 78 | 4.444 | 4.219 | 3.824 | 3.404 | 3.099 | 2.913 | 2.773 | 2.669 | 2.644 | 2.671 | 2.615 | 2.391 | 2.096 | 1.858 | 1.689 | 1.539 | 1.408 |
| 79 | 3.807 | 3.610 | 3.261 | 2.890 | 2.624 | 2.466 | 2.347 | 2.255 | 2.227 | 2.249 | 2.207 | 2.028 | 1.787 | 1.590 | 1.451 | 1.326 | 1.215 |
| 80 | 3.245 | 3.075 | 2.770 | 2.445 | 2.215 | 2.081 | 1.980 | 1.898 | 1.868 | 1.883 | 1.854 | 1.712 | 1.515 | 1.354 | 1.241 | 1.140 | 1.050 |

ZONAL MEAN NUMBER DENSITY (/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **JANUARY** | | | | | | | | | | | | | | | | | | |
| 18 | 2.32 | 2.34 | 2.40 | 2.51 | 2.65 | 2.76 | 2.80 | 2.80 | 2.80 | 2.79 | 2.74 | 2.63 | 2.48 | 2.37 | 2.32 | 2.31 | 2.31 | +24 |
| 20 | 1.73 | 1.74 | 1.77 | 1.83 | 1.90 | 1.94 | 1.96 | 1.97 | 1.97 | 1.98 | 1.95 | 1.89 | 1.80 | 1.73 | 1.69 | 1.68 | 1.67 | |
| 22 | 1.28 | 1.29 | 1.30 | 1.33 | 1.36 | 1.39 | 1.39 | 1.39 | 1.39 | 1.40 | 1.39 | 1.35 | 1.30 | 1.26 | 1.22 | 1.20 | 1.18 | |
| 24 | 9.51 | 9.53 | 9.61 | 9.74 | 9.88 | 9.95 | 9.94 | 9.92 | 9.91 | 9.92 | 9.86 | 9.67 | 9.43 | 9.12 | 8.80 | 8.49 | 8.23 | +23 |
| 26 | 7.06 | 7.07 | 7.09 | 7.14 | 7.18 | 7.19 | 7.16 | 7.13 | 7.10 | 7.09 | 7.07 | 7.00 | 6.86 | 6.65 | 6.35 | 6.02 | 5.74 | |
| 28 | 5.26 | 5.25 | 5.25 | 5.25 | 5.25 | 5.23 | 5.19 | 5.15 | 5.12 | 5.11 | 5.11 | 5.09 | 5.02 | 4.86 | 4.60 | 4.29 | 4.03 | |
| 30 | 3.93 | 3.91 | 3.90 | 3.88 | 3.86 | 3.82 | 3.78 | 3.75 | 3.72 | 3.72 | 3.72 | 3.72 | 3.68 | 3.56 | 3.34 | 3.08 | 2.86 | |
| 32 | 2.94 | 2.93 | 2.91 | 2.88 | 2.85 | 2.81 | 2.77 | 2.74 | 2.73 | 2.72 | 2.73 | 2.73 | 2.71 | 2.62 | 2.44 | 2.23 | 2.05 | |
| 34 | 2.21 | 2.20 | 2.18 | 2.15 | 2.12 | 2.08 | 2.04 | 2.02 | 2.01 | 2.01 | 2.01 | 2.01 | 2.00 | 1.93 | 1.79 | 1.63 | 1.49 | |
| 36 | 1.67 | 1.66 | 1.64 | 1.62 | 1.58 | 1.55 | 1.52 | 1.50 | 1.49 | 1.49 | 1.49 | 1.49 | 1.48 | 1.42 | 1.32 | 1.20 | 1.09 | |
| 38 | 1.27 | 1.26 | 1.25 | 1.22 | 1.19 | 1.16 | 1.13 | 1.12 | 1.11 | 1.11 | 1.11 | 1.11 | 1.09 | 1.06 | 0.98 | 0.89 | 0.81 | |
| 40 | 9.70 | 9.65 | 9.53 | 9.31 | 9.03 | 8.76 | 8.54 | 8.40 | 8.35 | 8.35 | 8.34 | 8.30 | 8.16 | 7.86 | 7.32 | 6.62 | 6.04 | +22 |
| 42 | 7.45 | 7.43 | 7.32 | 7.14 | 6.90 | 6.66 | 6.47 | 6.36 | 6.32 | 6.32 | 6.31 | 6.25 | 6.13 | 5.90 | 5.49 | 4.98 | 4.53 | |
| 44 | 5.77 | 5.75 | 5.67 | 5.51 | 5.31 | 5.10 | 4.94 | 4.84 | 4.81 | 4.82 | 4.80 | 4.75 | 4.64 | 4.46 | 4.15 | 3.76 | 3.42 | |
| 46 | 4.49 | 4.48 | 4.42 | 4.28 | 4.11 | 3.94 | 3.80 | 3.72 | 3.69 | 3.69 | 3.68 | 3.64 | 3.55 | 3.40 | 3.15 | 2.85 | 2.59 | |
| 48 | 3.52 | 3.52 | 3.46 | 3.35 | 3.20 | 3.06 | 2.94 | 2.87 | 2.85 | 2.85 | 2.85 | 2.81 | 2.73 | 2.61 | 2.41 | 2.17 | 1.97 | |
| 50 | 2.78 | 2.77 | 2.73 | 2.63 | 2.51 | 2.39 | 2.29 | 2.23 | 2.21 | 2.22 | 2.22 | 2.19 | 2.12 | 2.01 | 1.85 | 1.66 | 1.50 | |
| 52 | 2.20 | 2.20 | 2.16 | 2.08 | 1.98 | 1.87 | 1.79 | 1.74 | 1.73 | 1.74 | 1.74 | 1.71 | 1.65 | 1.56 | 1.43 | 1.27 | 1.15 | |
| 54 | 1.76 | 1.75 | 1.71 | 1.65 | 1.56 | 1.48 | 1.41 | 1.36 | 1.35 | 1.36 | 1.37 | 1.34 | 1.29 | 1.21 | 1.10 | 0.98 | 0.88 | |
| 56 | 1.40 | 1.39 | 1.36 | 1.30 | 1.23 | 1.16 | 1.11 | 1.07 | 1.06 | 1.07 | 1.07 | 1.05 | 1.01 | 0.94 | 0.85 | 0.76 | 0.68 | |
| 58 | 1.12 | 1.11 | 1.08 | 1.03 | 0.97 | 0.92 | 0.87 | 0.84 | 0.84 | 0.84 | 0.85 | 0.83 | 0.78 | 0.73 | 0.66 | 0.58 | 0.53 | |
| 60 | 8.96 | 8.87 | 8.61 | 8.18 | 7.69 | 7.23 | 6.86 | 6.64 | 6.60 | 6.61 | 6.63 | 6.42 | 6.05 | 5.59 | 5.06 | 4.51 | 4.07 | +21 |
| 62 | 7.15 | 7.06 | 6.83 | 6.45 | 6.04 | 5.66 | 5.38 | 5.22 | 5.18 | 5.22 | 5.17 | 4.97 | 4.44 | 4.26 | 3.87 | 3.47 | 3.16 | |
| 64 | 5.69 | 5.60 | 5.39 | 5.06 | 4.71 | 4.41 | 4.20 | 4.08 | 4.06 | 4.08 | 4.01 | 3.81 | 3.53 | 3.23 | 2.94 | 2.67 | 2.45 | |
| 66 | 4.51 | 4.43 | 4.23 | 3.94 | 3.65 | 3.41 | 3.25 | 3.17 | 3.16 | 3.17 | 3.09 | 2.91 | 2.66 | 2.43 | 2.22 | 2.04 | 1.89 | |
| 68 | 3.56 | 3.48 | 3.30 | 3.04 | 2.80 | 2.61 | 2.50 | 2.45 | 2.45 | 2.44 | 2.37 | 2.20 | 2.00 | 1.82 | 1.67 | 1.55 | 1.45 | |
| 70 | 2.79 | 2.71 | 2.55 | 2.33 | 2.12 | 1.98 | 1.90 | 1.87 | 1.88 | 1.87 | 1.80 | 1.66 | 1.49 | 1.36 | 1.25 | 1.17 | 1.10 | |
| 72 | 2.16 | 2.10 | 1.95 | 1.76 | 1.59 | 1.48 | 1.43 | 1.42 | 1.42 | 1.42 | 1.36 | 1.24 | 1.11 | 1.01 | 0.93 | 0.88 | 0.83 | |
| 74 | 1.66 | 1.60 | 1.48 | 1.32 | 1.18 | 1.10 | 1.06 | 1.06 | 1.07 | 1.06 | 1.01 | 0.93 | 0.83 | 0.75 | 0.70 | 0.65 | 0.62 | |
| 76 | 1.26 | 1.21 | 1.10 | 0.97 | 0.87 | 0.80 | 0.78 | 0.78 | 0.79 | 0.78 | 0.75 | 0.69 | 0.62 | 0.56 | 0.52 | 0.49 | 0.46 | |
| 78 | 9.35 | 8.95 | 8.12 | 7.11 | 6.28 | 5.82 | 5.65 | 5.66 | 5.72 | 5.70 | 5.48 | 5.04 | 4.54 | 4.12 | 3.83 | 3.60 | 3.42 | +20 |
| 80 | 6.79 | 6.49 | 5.87 | 5.11 | 4.52 | 4.18 | 4.06 | 4.05 | 4.07 | 4.06 | 3.92 | 3.64 | 3.30 | 3.02 | 2.82 | 2.67 | 2.56 | |
| **FEBRUARY** | | | | | | | | | | | | | | | | | | |
| 18 | 2.29 | 2.33 | 2.42 | 2.54 | 2.67 | 2.76 | 2.80 | 2.82 | 2.84 | 2.83 | 2.78 | 2.65 | 2.50 | 2.36 | 2.28 | 2.23 | 2.20 | +24 |
| 20 | 1.70 | 1.73 | 1.78 | 1.85 | 1.92 | 1.96 | 1.97 | 1.98 | 2.00 | 2.01 | 1.98 | 1.91 | 1.82 | 1.73 | 1.67 | 1.64 | .62 | |
| 22 | 1.26 | 1.28 | 1.31 | 1.35 | 1.38 | 1.40 | 1.40 | 1.40 | 1.40 | 1.41 | 1.40 | 1.36 | 1.31 | 1.26 | 1.22 | 1.16 | ..16 | |
| 24 | 0.93 | 0.94 | 0.96 | 0.99 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 | 0.99 | 0.99 | 0.97 | 0.95 | 0.92 | 0.89 | 0.85 | 0.82 | |
| 26 | 6.91 | 6.96 | 7.07 | 7.21 | 7.27 | 7.24 | 7.15 | 7.09 | 7.08 | 7.08 | 7.06 | 7.01 | 6.92 | 6.75 | 6.46 | 6.12 | 5.83 | +23 |
| 28 | 5.11 | 5.14 | 5.21 | 5.29 | 5.31 | 5.25 | 5.17 | 5.12 | 5.09 | 5.09 | 5.09 | 5.08 | 5.04 | 4.93 | 4.71 | 4.43 | 4.19 | |
| 30 | 3.79 | 3.81 | 3.86 | 3.89 | 3.89 | 3.84 | 3.77 | 3.72 | 3.70 | 3.70 | 3.70 | 3.70 | 3.68 | 3.61 | 3.44 | 3.22 | 3.03 | |
| 32 | 2.82 | 2.84 | 2.86 | 2.88 | 2.87 | 2.82 | 2.76 | 2.72 | 2.71 | 2.71 | 2.71 | 2.71 | 2.69 | 2.64 | 2.52 | 2.36 | 2.22 | |
| 34 | 2.10 | 2.12 | 2.14 | 2.14 | 2.12 | 2.09 | 2.04 | 2.01 | 1.99 | 2.00 | 2.00 | 2.00 | 1.98 | 1.93 | 1.85 | 1.73 | 1.63 | |
| 36 | 1.58 | 1.59 | 1.60 | 1.60 | 1.58 | 1.55 | 1.52 | 1.49 | 1.48 | 1.48 | 1.49 | 1.48 | 1.46 | 1.42 | 1.36 | 1.28 | 1.21 | |
| 38 | 1.19 | 1.20 | 1.21 | 1.20 | 1.19 | 1.16 | 1.14 | 1.11 | 1.10 | 1.11 | 1.11 | 1.10 | 1.08 | 1.05 | 1.00 | 0.94 | 0.89 | |
| 40 | 9.02 | 9.12 | 9.16 | 9.10 | 8.97 | 8.78 | 8.56 | 8.36 | 8.29 | 8.34 | 8.36 | 8.26 | 8.04 | 7.77 | 7.43 | 7.00 | 6.61 | +22 |
| 42 | 6.89 | 6.97 | 6.99 | 6.93 | 6.83 | 6.68 | 6.50 | 6.34 | 6.29 | 6.33 | 6.34 | 6.24 | 6.04 | 5.81 | 5.54 | 5.21 | 4.90 | |
| 44 | 5.29 | 5.36 | 5.38 | 5.33 | 5.23 | 5.12 | 4.97 | 4.85 | 4.81 | 4.84 | 4.85 | 4.76 | 4.58 | 4.38 | 4.15 | 3.88 | 3.64 | |
| 46 | 4.09 | 4.15 | 4.16 | 4.12 | 4.04 | 3.95 | 3.84 | 3.74 | 3.71 | 3.73 | 3.74 | 3.68 | 3.51 | 3.33 | 3.14 | 2.91 | 2.71 | |
| 48 | 3.19 | 3.23 | 3.24 | 3.21 | 3.15 | 3.07 | 2.98 | 2.91 | 2.89 | 2.91 | 2.91 | 2.84 | 2.71 | 2.56 | 2.38 | 2.19 | 2.02 | |
| 50 | 2.49 | 2.53 | 2.54 | 2.52 | 2.46 | 2.39 | 2.32 | 2.27 | 2.26 | 2.28 | 2.28 | 2.22 | 2.11 | 1.98 | 1.82 | 1.66 | 1.52 | |
| 52 | 1.96 | 1.99 | 2.00 | 1.98 | 1.94 | 1.88 | 1.82 | 1.79 | 1.78 | 1.80 | 1.79 | 1.74 | 1.65 | 1.53 | 1.40 | 1.26 | 1.16 | |
| 54 | 1.55 | 1.57 | 1.58 | 1.57 | 1.53 | 1.48 | 1.43 | 1.41 | 1.41 | 1.42 | 1.42 | 1.37 | 1.29 | 1.19 | 1.08 | 0.97 | 0.88 | |
| 56 | 1.22 | 1.24 | 1.25 | 1.24 | 1.20 | 1.16 | 1.13 | 1.11 | 1.12 | 1.13 | 1.12 | 1.08 | 1.01 | 0.93 | 0.83 | 0.75 | 0.68 | |
| 58 | 9.67 | 9.82 | 9.89 | 9.77 | 9.47 | 9.12 | 8.86 | 8.77 | 8.83 | 8.91 | 8.82 | 8.43 | 7.86 | 7.16 | 6.44 | 5.78 | 5.31 | +21 |
| 60 | 7.66 | 7.77 | 7.80 | 7.69 | 7.43 | 7.15 | 6.95 | 6.89 | 6.96 | 7.02 | 6.92 | 6.59 | 6.08 | 5.51 | 4.97 | 4.49 | 4.16 | |
| 62 | 6.05 | 6.13 | 6.13 | 6.02 | 5.80 | 5.58 | 5.42 | 5.39 | 5.45 | 5.49 | 5.39 | 5.09 | 4.66 | 4.22 | 3.82 | 3.49 | 3.27 | |
| 64 | 4.78 | 4.82 | 4.80 | 4.68 | 4.50 | 4.32 | 4.21 | 4.19 | 4.24 | 4.27 | 4.17 | 3.91 | 3.55 | 3.20 | 2.92 | 2.71 | 2.57 | |
| 66 | 3.76 | 3.77 | 3.73 | 3.61 | 3.46 | 3.33 | 3.25 | 3.24 | 3.27 | 3.29 | 3.20 | 2.98 | 2.68 | 2.42 | 2.23 | 2.10 | 2.02 | |
| 68 | 2.94 | 2.94 | 2.88 | 2.76 | 2.64 | 2.54 | 2.49 | 2.49 | 2.51 | 2.52 | 2.44 | 2.25 | 2.02 | 1.82 | 1.69 | 1.61 | 1.57 | |
| 70 | 2.29 | 2.27 | 2.20 | 2.09 | 1.99 | 1.93 | 1.90 | 1.90 | 1.91 | 1.91 | 1.84 | 1.69 | 1.51 | 1.36 | 1.27 | 1.23 | 1.21 | |
| 72 | 1.77 | 1.74 | 1.67 | 1.57 | 1.49 | 1.45 | 1.43 | 1.44 | 1.44 | 1.44 | 1.38 | 1.27 | 1.13 | 1.02 | 0.96 | 0.93 | 0.93 | |
| 74 | 1.35 | 1.32 | 1.25 | 1.17 | 1.10 | 1.07 | 1.07 | 1.08 | 1.08 | 1.07 | 1.03 | 0.95 | 0.84 | 0.76 | 0.72 | 0.70 | 0.70 | |
| 76 | 1.01 | 0.98 | 0.93 | 0.86 | 0.81 | 0.79 | 0.79 | 0.80 | 0.80 | 0.79 | 0.76 | 0.70 | 0.63 | 0.57 | 0.54 | 0.52 | 0.52 | |
| 78 | 7.42 | 7.22 | 6.78 | 6.25 | 5.88 | 5.75 | 5.76 | 5.79 | 5.80 | 5.78 | 5.59 | 5.16 | 4.63 | 4.21 | 3.98 | 3.91 | 3.90 | +20 |
| 80 | 5.32 | 5.19 | 4.87 | 4.50 | 4.23 | 4.14 | 4.12 | 4.11 | 4.12 | 4.13 | 4.03 | 3.75 | 3.37 | 3.08 | 2.94 | 2.91 | 2.91 | |

ZONAL MEAN NUMBER DENSITY (/M CU)

**MARCH**

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2.24 | 2.30 | 2.39 | 2.51 | 2.63 | 2.72 | 2.77 | 2.80 | 2.81 | 2.79 | 2.73 | 2.62 | 2.51 | 2.41 | 2.32 | 2.24 | 2.17 | +24 |
| 20 | 1.66 | 1.70 | 1.77 | 1.84 | 1.91 | 1.95 | 1.97 | 1.97 | 1.98 | 1.97 | 1.94 | 1.89 | 1.83 | 1.77 | 1.71 | 1.66 | 1.61 | |
| 22 | 1.23 | 1.25 | 1.30 | 1.34 | 1.38 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.38 | 1.35 | 1.33 | 1.30 | 1.26 | 1.21 | 1.17 | |
| 24 | 0.90 | 0.92 | 0.95 | 0.98 | 1.00 | 1.00 | 0.99 | 0.99 | 0.99 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.92 | 0.88 | 0.85 | |
| 26 | 6.63 | 6.77 | 6.97 | 7.16 | 7.25 | 7.23 | 7.15 | 7.09 | 7.07 | 7.06 | 7.05 | 7.02 | 6.98 | 6.89 | 6.71 | 6.45 | 6.21 | +23 |
| 28 | 4.86 | 4.97 | 5.12 | 5.24 | 5.28 | 5.25 | 5.18 | 5.13 | 5.10 | 5.10 | 5.10 | 5.09 | 5.07 | 5.02 | 4.89 | 4.72 | 4.55 | |
| 30 | 3.57 | 3.65 | 3.76 | 3.84 | 3.87 | 3.84 | 3.79 | 3.74 | 3.72 | 3.72 | 3.72 | 3.71 | 3.69 | 3.65 | 3.56 | 3.45 | 3.35 | |
| 32 | 2.62 | 2.69 | 2.76 | 2.82 | 2.84 | 2.82 | 2.78 | 2.74 | 2.72 | 2.73 | 2.73 | 2.72 | 2.70 | 2.65 | 2.60 | 2.53 | 2.47 | |
| 34 | 1.92 | 1.98 | 2.04 | 2.08 | 2.09 | 2.08 | 2.06 | 2.02 | 2.01 | 2.01 | 2.02 | 2.01 | 1.98 | 1.93 | 1.89 | 1.85 | 1.81 | |
| 36 | 1.41 | 1.46 | 1.51 | 1.54 | 1.55 | 1.55 | 1.53 | 1.50 | 1.49 | 1.49 | 1.50 | 1.49 | 1.46 | 1.42 | 1.38 | 1.36 | 1.33 | |
| 38 | 1.04 | 1.08 | 1.12 | 1.14 | 1.15 | 1.15 | 1.14 | 1.12 | 1.11 | 1.12 | 1.12 | 1.11 | 1.08 | 1.05 | 1.02 | 1.00 | 0.98 | |
| 40 | 7.75 | 8.05 | 8.35 | 8.56 | 8.66 | 8.67 | 8.59 | 8.46 | 8.39 | 8.42 | 8.44 | 8.33 | 8.07 | 7.78 | 7.53 | 7.36 | 7.24 | +22 |
| 42 | 5.79 | 6.03 | 6.28 | 6.46 | 6.55 | 6.57 | 6.51 | 6.42 | 6.37 | 6.39 | 6.40 | 6.31 | 6.09 | 5.84 | 5.63 | 5.46 | 5.36 | |
| 44 | 4.35 | 4.55 | 4.76 | 4.92 | 4.99 | 5.01 | 4.98 | 4.92 | 4.89 | 4.90 | 4.90 | 4.82 | 4.64 | 4.43 | 4.24 | 4.09 | 3.99 | |
| 46 | 3.30 | 3.46 | 3.64 | 3.77 | 3.84 | 3.86 | 3.84 | 3.80 | 3.79 | 3.79 | 3.78 | 3.71 | 3.57 | 3.40 | 3.23 | 3.09 | 2.99 | |
| 48 | 2.52 | 2.66 | 2.81 | 2.92 | 2.98 | 2.99 | 2.98 | 2.97 | 2.96 | 2.96 | 2.94 | 2.88 | 2.77 | 2.63 | 2.48 | 2.36 | 2.27 | |
| 50 | 1.93 | 2.05 | 2.18 | 2.28 | 2.32 | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 | 2.31 | 2.25 | 2.17 | 2.05 | 1.93 | 1.81 | 1.73 | |
| 52 | 1.50 | 1.59 | 1.71 | 1.79 | 1.82 | 1.83 | 1.83 | 1.84 | 1.84 | 1.84 | 1.82 | 1.77 | 1.70 | 1.61 | 1.50 | 1.40 | 1.34 | |
| 54 | 1.16 | 1.24 | 1.34 | 1.41 | 1.44 | 1.44 | 1.44 | 1.45 | 1.46 | 1.46 | 1.43 | 1.39 | 1.34 | 1.26 | 1.17 | 1.09 | 1.04 | |
| 56 | 0.91 | 0.97 | 1.05 | 1.11 | 1.13 | 1.13 | 1.13 | 1.15 | 1.16 | 1.16 | 1.13 | 1.10 | 1.05 | 0.99 | 0.92 | 0.85 | 0.81 | |
| 58 | 7.06 | 7.57 | 8.21 | 8.69 | 8.88 | 8.88 | 8.91 | 9.03 | 9.15 | 9.11 | 8.90 | 8.59 | 8.19 | 7.70 | 7.14 | 6.66 | 6.34 | +21 |
| 60 | 5.51 | 5.90 | 6.40 | 6.79 | 6.95 | 6.94 | 6.96 | 7.08 | 7.19 | 7.15 | 6.96 | 6.70 | 6.37 | 5.97 | 5.54 | 5.17 | 4.95 | |
| 62 | 4.29 | 4.58 | 4.96 | 5.27 | 5.40 | 5.40 | 5.42 | 5.52 | 5.61 | 5.57 | 5.41 | 5.19 | 4.92 | 4.60 | 4.26 | 4.00 | 3.84 | |
| 64 | 3.33 | 3.54 | 3.82 | 4.06 | 4.17 | 4.17 | 4.19 | 4.27 | 4.34 | 4.31 | 4.18 | 3.99 | 3.77 | 3.52 | 3.26 | 3.07 | 2.96 | |
| 66 | 2.52 | 2.72 | 2.92 | 3.10 | 3.19 | 3.20 | 3.23 | 3.29 | 3.34 | 3.31 | 3.20 | 3.05 | 2.87 | 2.67 | 2.48 | 2.34 | 2.26 | |
| 68 | 1.98 | 2.08 | 2.22 | 2.34 | 2.42 | 2.44 | 2.47 | 2.52 | 2.55 | 2.52 | 2.44 | 2.32 | 2.17 | 2.02 | 1.87 | 1.77 | 1.72 | |
| 70 | 1.51 | 1.58 | 1.67 | 1.76 | 1.82 | 1.85 | 1.88 | 1.92 | 1.93 | 1.91 | 1.85 | 1.75 | 1.64 | 1.52 | 1.41 | 1.33 | 1.29 | |
| 72 | 1.15 | 1.19 | 1.25 | 1.31 | 1.36 | 1.39 | 1.43 | 1.45 | 1.46 | 1.44 | 1.39 | 1.32 | 1.23 | 1.14 | 1.05 | 1.00 | 0.96 | |
| 74 | 0.86 | 0.89 | 0.93 | 0.97 | 1.00 | 1.04 | 1.07 | 1.09 | 1.09 | 1.07 | 1.04 | 0.99 | 0.92 | 0.85 | 0.79 | 0.74 | 0.72 | |
| 76 | 6.43 | 6.65 | 6.88 | 7.10 | 7.37 | 7.70 | 7.97 | 8.07 | 8.03 | 7.92 | 7.73 | 7.38 | 6.89 | 6.35 | 5.88 | 5.54 | 5.32 | +20 |
| 78 | 4.73 | 4.88 | 5.03 | 5.17 | 5.37 | 5.62 | 5.82 | 5.87 | 5.82 | 5.76 | 5.67 | 5.45 | 5.10 | 4.72 | 4.37 | 4.11 | 3.92 | |
| 80 | 3.41 | 3.53 | 3.63 | 3.73 | 3.86 | 4.03 | 4.15 | 4.15 | 4.11 | 4.10 | 4.08 | 3.96 | 3.74 | 3.47 | 3.22 | 3.02 | 2.87 | |

**APRIL**

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2.24 | 2.26 | 2.33 | 2.44 | 2.57 | 2.68 | 2.75 | 2.79 | 2.80 | 2.78 | 2.72 | 2.63 | 2.53 | 2.45 | 2.39 | 2.36 | 2.35 | +24 |
| 20 | 1.66 | 1.67 | 1.72 | 1.79 | 1.87 | 1.93 | 1.96 | 1.97 | 1.97 | 1.96 | 1.93 | 1.88 | 1.84 | 1.79 | 1.77 | 1.75 | 1.75 | |
| 22 | 1.21 | 1.23 | 1.27 | 1.31 | 1.35 | 1.38 | 1.39 | 1.39 | 1.39 | 1.38 | 1.37 | 1.35 | 1.33 | 1.31 | 1.30 | 1.29 | 1.29 | |
| 24 | 8.73 | 8.97 | 9.30 | 9.62 | 9.84 | 9.91 | 9.91 | 9.89 | 9.87 | 9.83 | 9.77 | 9.71 | 9.65 | 9.59 | 9.54 | 9.52 | 9.54 | +23 |
| 26 | 6.26 | 6.51 | 6.81 | 7.04 | 7.16 | 7.18 | 7.14 | 7.10 | 7.07 | 7.06 | 7.05 | 7.03 | 7.01 | 6.98 | 6.98 | 7.00 | 7.04 | |
| 28 | 4.47 | 4.70 | 4.96 | 5.15 | 5.23 | 5.23 | 5.19 | 5.14 | 5.11 | 5.11 | 5.12 | 5.12 | 5.10 | 5.08 | 5.10 | 5.14 | 5.19 | |
| 30 | 3.19 | 3.39 | 3.60 | 3.76 | 3.83 | 3.84 | 3.80 | 3.75 | 3.72 | 3.73 | 3.75 | 3.75 | 3.72 | 3.70 | 3.72 | 3.77 | 3.82 | |
| 32 | 2.28 | 2.44 | 2.61 | 2.74 | 2.81 | 2.82 | 2.80 | 2.76 | 2.73 | 2.74 | 2.76 | 2.75 | 2.72 | 2.70 | 2.72 | 2.77 | 2.81 | |
| 34 | 1.63 | 1.75 | 1.89 | 2.00 | 2.06 | 2.08 | 2.07 | 2.04 | 2.02 | 2.03 | 2.04 | 2.03 | 2.00 | 1.98 | 1.99 | 2.03 | 2.06 | |
| 36 | 1.17 | 1.26 | 1.37 | 1.46 | 1.52 | 1.54 | 1.54 | 1.52 | 1.51 | 1.51 | 1.52 | 1.51 | 1.48 | 1.46 | 1.46 | 1.49 | 1.51 | |
| 38 | 0.84 | 0.91 | 1.00 | 1.07 | 1.12 | 1.15 | 1.15 | 1.15 | 1.13 | 1.13 | 1.14 | 1.13 | 1.10 | 1.08 | 1.08 | 1.10 | 1.11 | |
| 40 | 6.14 | 6.65 | 7.29 | 7.89 | 8.33 | 8.59 | 8.65 | 8.59 | 8.53 | 8.54 | 8.56 | 8.47 | 8.29 | 8.13 | 8.08 | 8.12 | 8.18 | +22 |
| 42 | 4.50 | 4.88 | 5.38 | 5.86 | 6.24 | 6.46 | 6.54 | 6.53 | 6.49 | 6.50 | 6.49 | 6.43 | 6.29 | 6.16 | 6.09 | 6.07 | 6.08 | |
| 44 | 3.33 | 3.61 | 4.00 | 4.40 | 4.71 | 4.90 | 4.99 | 5.00 | 4.99 | 4.98 | 4.97 | 4.92 | 4.82 | 4.71 | 4.63 | 4.58 | 4.56 | |
| 46 | 2.48 | 2.70 | 3.01 | 3.33 | 3.59 | 3.75 | 3.83 | 3.86 | 3.87 | 3.86 | 3.84 | 3.79 | 3.73 | 3.64 | 3.56 | 3.49 | 3.45 | |
| 48 | 1.87 | 2.04 | 2.29 | 2.55 | 2.76 | 2.89 | 2.97 | 3.01 | 3.02 | 3.01 | 2.99 | 2.95 | 2.91 | 2.84 | 2.76 | 2.69 | 2.65 | |
| 50 | 1.42 | 1.56 | 1.75 | 1.96 | 2.14 | 2.25 | 2.32 | 2.36 | 2.37 | 2.36 | 2.34 | 2.31 | 2.28 | 2.23 | 2.16 | 2.09 | 2.05 | |
| 52 | 1.09 | 1.19 | 1.35 | 1.52 | 1.67 | 1.76 | 1.82 | 1.86 | 1.87 | 1.86 | 1.84 | 1.82 | 1.79 | 1.76 | 1.70 | 1.64 | 1.60 | |
| 54 | 0.84 | 0.92 | 1.05 | 1.19 | 1.30 | 1.38 | 1.43 | 1.47 | 1.48 | 1.47 | 1.45 | 1.43 | 1.42 | 1.39 | 1.34 | 1.29 | 1.26 | |
| 56 | 0.65 | 0.71 | 0.81 | 0.93 | 1.02 | 1.09 | 1.13 | 1.16 | 1.17 | 1.16 | 1.14 | 1.13 | 1.12 | 1.09 | 1.06 | 1.02 | 0.99 | |
| 58 | 5.08 | 5.54 | 6.30 | 7.21 | 8.00 | 8.53 | 8.87 | 9.13 | 9.25 | 9.16 | 8.98 | 8.85 | 8.77 | 8.60 | 8.30 | 7.98 | 7.77 | +21 |
| 60 | 3.96 | 4.29 | 4.87 | 5.59 | 6.24 | 6.67 | 6.95 | 7.16 | 7.26 | 7.18 | 7.02 | 6.92 | 6.86 | 6.73 | 6.49 | 6.23 | 6.07 | |
| 62 | 3.08 | 3.31 | 3.75 | 4.31 | 4.83 | 5.18 | 5.41 | 5.58 | 5.66 | 5.58 | 5.45 | 5.37 | 5.34 | 5.24 | 5.04 | 4.84 | 4.71 | |
| 64 | 2.39 | 2.55 | 2.87 | 3.30 | 3.71 | 4.00 | 4.18 | 4.32 | 4.38 | 4.31 | 4.20 | 4.15 | 4.13 | 4.05 | 3.89 | 3.73 | 3.63 | |
| 66 | 1.84 | 1.95 | 2.18 | 2.51 | 2.83 | 3.06 | 3.21 | 3.32 | 3.36 | 3.30 | 3.22 | 3.18 | 3.17 | 3.11 | 2.99 | 2.86 | 2.78 | |
| 68 | 1.42 | 1.49 | 1.65 | 1.90 | 2.15 | 2.33 | 2.45 | 2.53 | 2.55 | 2.51 | 2.46 | 2.43 | 2.42 | 2.37 | 2.28 | 2.18 | 2.12 | |
| 70 | 1.08 | 1.13 | 1.25 | 1.43 | 1.62 | 1.77 | 1.86 | 1.91 | 1.92 | 1.90 | 1.86 | 1.85 | 1.84 | 1.80 | 1.73 | 1.65 | 1.61 | |
| 72 | 0.82 | 0.86 | 0.94 | 1.07 | 1.21 | 1.33 | 1.40 | 1.43 | 1.43 | 1.42 | 1.41 | 1.40 | 1.39 | 1.36 | 1.31 | 1.25 | 1.22 | |
| 74 | 0.62 | 0.65 | 0.70 | 0.79 | 0.90 | 0.99 | 1.04 | 1.06 | 1.06 | 1.05 | 1.05 | 1.05 | 1.04 | 1.02 | 0.98 | 0.95 | 0.92 | |
| 76 | 4.67 | 4.86 | 5.25 | 5.87 | 6.64 | 7.34 | 7.72 | 7.78 | 7.73 | 7.74 | 7.81 | 7.85 | 7.78 | 7.60 | 7.37 | 7.12 | 6.92 | +20 |
| 78 | 3.48 | 3.62 | 3.88 | 4.31 | 4.86 | 5.36 | 5.62 | 5.62 | 5.55 | 5.59 | 5.70 | 5.77 | 5.74 | 5.63 | 5.48 | 5.31 | 5.16 | |
| 80 | 2.57 | 2.66 | 2.84 | 3.13 | 3.50 | 3.84 | 3.99 | 3.97 | 3.91 | 3.94 | 4.06 | 4.16 | 4.18 | 4.13 | 4.03 | 3.90 | 3.78 | |

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ZONAL MEAN NUMBER DENSITY (/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MAY** | | | | | | | | | | | | | | | | | | |
| 18 | 2.26 | 2.29 | 2.33 | 2.40 | 2.51 | 2.64 | 2.74 | 2.79 | 2.80 | 2.79 | 2.75 | 2.68 | 2.58 | 2.50 | 2.45 | 2.43 | 2.41 | +24 |
| 20 | 1.66 | 1.69 | 1.72 | 1.77 | 1.83 | 1.90 | 1.95 | 1.97 | 1.97 | 1.96 | 1.94 | 1.91 | 1.86 | 1.83 | 1.81 | 1.81 | 1.80 | |
| 22 | 1.18 | 1.22 | 1.26 | 1.30 | 1.33 | 1.36 | 1.38 | 1.39 | 1.39 | 1.38 | 1.38 | 1.36 | 1.35 | 1.34 | 1.33 | 1.33 | 1.33 | |
| 24 | 8.16 | 8.66 | 9.18 | 9.52 | 9.70 | 9.83 | 9.90 | 9.91 | 9.89 | 9.87 | 9.86 | 9.84 | 9.80 | 9.78 | 9.79 | 9.81 | 9.81 | +23 |
| 26 | 5.63 | 6.11 | 6.63 | 6.96 | 7.10 | 7.13 | 7.14 | 7.12 | 7.10 | 7.10 | 7.13 | 7.14 | 7.14 | 7.14 | 7.17 | 7.20 | 7.22 | |
| 28 | 3.89 | 4.30 | 4.76 | 5.07 | 5.20 | 5.21 | 5.19 | 5.16 | 5.14 | 5.16 | 5.19 | 5.21 | 5.22 | 5.22 | 5.25 | 5.28 | 5.31 | |
| 30 | 2.70 | 3.02 | 3.40 | 3.68 | 3.80 | 3.82 | 3.79 | 3.77 | 3.76 | 3.77 | 3.81 | 3.82 | 3.82 | 3.82 | 3.84 | 3.88 | 3.91 | |
| 32 | 1.88 | 2.12 | 2.42 | 2.66 | 2.78 | 2.81 | 2.79 | 2.77 | 2.76 | 2.78 | 2.81 | 2.82 | 2.81 | 2.81 | 2.82 | 2.86 | 2.89 | |
| 34 | 1.33 | 1.50 | 1.72 | 1.92 | 2.03 | 2.07 | 2.07 | 2.05 | 2.05 | 2.06 | 2.08 | 2.08 | 2.08 | 2.07 | 2.08 | 2.11 | 2.14 | |
| 36 | 0.95 | 1.07 | 1.23 | 1.38 | 1.49 | 1.53 | 1.54 | 1.53 | 1.53 | 1.54 | 1.55 | 1.55 | 1.54 | 1.54 | 1.55 | 1.57 | 1.59 | |
| 38 | 0.68 | 0.77 | 0.88 | 1.00 | 1.09 | 1.14 | 1.15 | 1.15 | 1.15 | 1.15 | 1.16 | 1.16 | 1.15 | 1.15 | 1.15 | 1.17 | 1.19 | |
| 40 | 4.96 | 5.53 | 6.37 | 7.28 | 8.03 | 8.47 | 8.64 | 8.67 | 8.68 | 8.70 | 8.72 | 8.71 | 8.68 | 8.66 | 8.70 | 8.80 | 8.91 | +22 |
| 42 | 3.65 | 4.04 | 4.64 | 5.34 | 5.95 | 6.35 | 6.54 | 6.59 | 6.60 | 6.61 | 6.62 | 6.61 | 6.59 | 6.59 | 6.62 | 6.68 | 6.75 | |
| 44 | 2.71 | 2.98 | 3.42 | 3.95 | 4.45 | 4.80 | 4.98 | 5.04 | 5.06 | 5.06 | 5.06 | 5.06 | 5.05 | 5.06 | 5.08 | 5.11 | 5.15 | |
| 46 | 2.03 | 2.22 | 2.54 | 2.95 | 3.36 | 3.66 | 3.82 | 3.89 | 3.90 | 3.90 | 3.90 | 3.90 | 3.91 | 3.92 | 3.93 | 3.95 | 3.97 | |
| 48 | 1.54 | 1.67 | 1.91 | 2.23 | 2.56 | 2.81 | 2.96 | 3.01 | 3.03 | 3.03 | 3.03 | 3.04 | 3.05 | 3.06 | 3.07 | 3.08 | 3.09 | |
| 50 | 1.17 | 1.27 | 1.45 | 1.70 | 1.96 | 2.18 | 2.30 | 2.35 | 2.36 | 2.37 | 2.37 | 2.38 | 2.39 | 2.41 | 2.42 | 2.42 | 2.42 | |
| 52 | 0.90 | 0.98 | 1.11 | 1.30 | 1.52 | 1.69 | 1.80 | 1.84 | 1.85 | 1.86 | 1.86 | 1.87 | 1.89 | 1.90 | 1.91 | 1.91 | 1.91 | |
| 54 | 0.70 | 0.75 | 0.86 | 1.01 | 1.18 | 1.32 | 1.41 | 1.45 | 1.46 | 1.46 | 1.46 | 1.48 | 1.49 | 1.51 | 1.51 | 1.51 | 1.51 | |
| 56 | 0.54 | 0.58 | 0.66 | 0.78 | 0.92 | 1.04 | 1.11 | 1.14 | 1.15 | 1.15 | 1.15 | 1.16 | 1.18 | 1.19 | 1.20 | 1.20 | 1.20 | |
| 58 | 4.22 | 4.53 | 5.14 | 6.03 | 7.11 | 8.09 | 8.74 | 9.01 | 9.04 | 9.02 | 9.05 | 9.17 | 9.31 | 9.44 | 9.51 | 9.54 | 9.54 | +21 |
| 60 | 3.29 | 3.53 | 3.98 | 4.66 | 5.50 | 6.30 | 6.85 | 7.08 | 7.10 | 7.06 | 7.08 | 7.18 | 7.32 | 7.43 | 7.51 | 7.55 | 7.57 | |
| 62 | 2.56 | 2.74 | 3.08 | 3.59 | 4.24 | 4.88 | 5.34 | 5.54 | 5.55 | 5.50 | 5.51 | 5.60 | 5.72 | 5.82 | 5.90 | 5.95 | 5.98 | |
| 64 | 1.98 | 2.12 | 2.38 | 2.76 | 3.25 | 3.75 | 4.14 | 4.30 | 4.30 | 4.26 | 4.27 | 4.34 | 4.44 | 4.53 | 4.60 | 4.66 | 4.70 | |
| 66 | 1.53 | 1.64 | 1.83 | 2.11 | 2.48 | 2.87 | 3.18 | 3.31 | 3.31 | 3.27 | 3.28 | 3.34 | 3.42 | 3.50 | 3.57 | 3.63 | 3.67 | |
| 68 | 1.17 | 1.26 | 1.40 | 1.61 | 1.88 | 2.18 | 2.42 | 2.52 | 2.52 | 2.49 | 2.51 | 2.56 | 2.62 | 2.68 | 2.75 | 2.81 | 2.85 | |
| 70 | 0.89 | 0.96 | 1.07 | 1.22 | 1.42 | 1.65 | 1.83 | 1.90 | 1.89 | 1.88 | 1.90 | 1.94 | 1.99 | 2.04 | 2.10 | 2.16 | 2.20 | |
| 72 | 0.68 | 0.73 | 0.82 | 0.93 | 1.07 | 1.24 | 1.37 | 1.41 | 1.41 | 1.41 | 1.43 | 1.47 | 1.50 | 1.54 | 1.59 | 1.65 | 1.69 | |
| 74 | 0.51 | 0.56 | 0.62 | 0.70 | 0.81 | 0.92 | 1.01 | 1.04 | 1.03 | 1.04 | 1.07 | 1.10 | 1.12 | 1.15 | 1.20 | 1.25 | 1.28 | |
| 76 | 3.82 | 4.18 | 4.66 | 5.25 | 6.01 | 6.83 | 7.37 | 7.48 | 7.44 | 7.57 | 7.87 | 8.13 | 8.30 | 8.55 | 8.97 | 9.40 | 9.67 | +20 |
| 78 | 2.86 | 3.13 | 3.48 | 3.90 | 4.42 | 4.97 | 5.29 | 5.32 | 5.30 | 5.44 | 5.70 | 5.92 | 6.05 | 6.27 | 6.64 | 7.00 | 7.20 | |
| 80 | 2.14 | 2.33 | 2.57 | 2.84 | 3.18 | 3.54 | 3.73 | 3.73 | 3.71 | 3.83 | 4.04 | 4.21 | 4.33 | 4.53 | 4.85 | 5.14 | 5.28 | |
| **JUNE** | | | | | | | | | | | | | | | | | | |
| 18 | 2.26 | 2.32 | 2.36 | 2.40 | 2.48 | 2.60 | 2.72 | 2.77 | 2.78 | 2.77 | 2.76 | 2.71 | 2.64 | 2.56 | 2.49 | 2.46 | 2.45 | +24 |
| 20 | 1.66 | 1.70 | 1.73 | 1.76 | 1.81 | 1.88 | 1.94 | 1.96 | 1.96 | 1.95 | 1.94 | 1.92 | 1.90 | 1.86 | 1.84 | 1.83 | 1.82 | |
| 22 | 1.14 | 1.20 | 1.26 | 1.29 | 1.32 | 1.35 | 1.38 | 1.39 | 1.39 | 1.38 | 1.38 | 1.38 | 1.37 | 1.36 | 1.36 | 1.36 | 1.35 | |
| 24 | 0.77 | 0.83 | 0.90 | 0.95 | 0.97 | 0.98 | 0.99 | 1.00 | 0.99 | 0.99 | 0.99 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| 26 | 5.10 | 5.69 | 6.39 | 6.89 | 7.11 | 7.17 | 7.18 | 7.17 | 7.16 | 7.15 | 7.18 | 7.24 | 7.29 | 7.32 | 7.35 | 7.39 | 7.43 | +23 |
| 28 | 3.41 | 3.89 | 4.50 | 4.99 | 5.22 | 5.25 | 5.22 | 5.20 | 5.20 | 5.21 | 5.25 | 5.30 | 5.34 | 5.38 | 5.41 | 5.45 | 5.50 | |
| 30 | 2.31 | 2.67 | 3.16 | 3.59 | 3.82 | 3.86 | 3.83 | 3.80 | 3.81 | 3.83 | 3.86 | 3.89 | 3.93 | 3.96 | 3.99 | 4.03 | 4.08 | |
| 32 | 1.59 | 1.85 | 2.22 | 2.57 | 2.79 | 2.84 | 2.82 | 2.80 | 2.81 | 2.82 | 2.85 | 2.87 | 2.90 | 2.92 | 2.95 | 2.99 | 3.03 | |
| 34 | 1.11 | 1.29 | 1.56 | 1.84 | 2.03 | 2.09 | 2.08 | 2.07 | 2.08 | 2.09 | 2.11 | 2.13 | 2.15 | 2.17 | 2.19 | 2.22 | 2.26 | |
| 36 | 0.79 | 0.91 | 1.11 | 1.32 | 1.47 | 1.54 | 1.55 | 1.54 | 1.55 | 1.56 | 1.57 | 1.59 | 1.60 | 1.62 | 1.64 | 1.66 | 1.69 | |
| 38 | 0.57 | 0.66 | 0.79 | 0.95 | 1.07 | 1.14 | 1.16 | 1.16 | 1.16 | 1.17 | 1.18 | 1.19 | 1.20 | 1.22 | 1.23 | 1.25 | 1.28 | |
| 40 | 4.15 | 4.76 | 5.72 | 6.83 | 7.81 | 8.42 | 8.67 | 8.73 | 8.75 | 8.78 | 8.84 | 8.93 | 9.05 | 9.19 | 9.35 | 9.53 | 9.68 | +22 |
| 42 | 3.07 | 3.50 | 4.18 | 4.98 | 5.73 | 6.27 | 6.55 | 6.62 | 6.63 | 6.64 | 6.69 | 6.77 | 6.87 | 7.00 | 7.15 | 7.29 | 7.40 | |
| 44 | 2.29 | 2.61 | 3.09 | 3.66 | 4.25 | 4.71 | 4.98 | 5.06 | 5.05 | 5.06 | 5.10 | 5.17 | 5.26 | 5.38 | 5.51 | 5.63 | 5.69 | |
| 46 | 1.73 | 1.96 | 2.30 | 2.73 | 3.18 | 3.57 | 3.81 | 3.89 | 3.88 | 3.88 | 3.92 | 3.98 | 4.06 | 4.17 | 4.28 | 4.37 | 4.42 | |
| 48 | 1.32 | 1.49 | 1.74 | 2.06 | 2.41 | 2.73 | 2.94 | 3.01 | 3.00 | 3.00 | 3.03 | 3.09 | 3.16 | 3.25 | 3.35 | 3.42 | 3.45 | |
| 50 | 1.01 | 1.14 | 1.33 | 1.56 | 1.84 | 2.11 | 2.28 | 2.34 | 2.33 | 2.33 | 2.36 | 2.41 | 2.47 | 2.55 | 2.64 | 2.70 | 2.72 | |
| 52 | 0.78 | 0.88 | 1.02 | 1.20 | 1.42 | 1.64 | 1.78 | 1.83 | 1.82 | 1.82 | 1.85 | 1.89 | 1.94 | 2.01 | 2.09 | 2.14 | 2.15 | |
| 54 | 0.61 | 0.68 | 0.79 | 0.93 | 1.10 | 1.28 | 1.40 | 1.43 | 1.42 | 1.42 | 1.45 | 1.49 | 1.53 | 1.59 | 1.66 | 1.70 | 1.71 | |
| 56 | 0.47 | 0.53 | 0.61 | 0.72 | 0.86 | 1.00 | 1.10 | 1.13 | 1.12 | 1.12 | 1.14 | 1.18 | 1.21 | 1.26 | 1.32 | 1.35 | 1.36 | |
| 58 | 0.37 | 0.41 | 0.48 | 0.56 | 0.67 | 0.78 | 0.86 | 0.89 | 0.88 | 0.88 | 0.90 | 0.93 | 0.96 | 1.00 | 1.05 | 1.08 | 1.09 | |
| 60 | 2.91 | 3.24 | 3.72 | 4.34 | 5.16 | 6.08 | 6.77 | 6.97 | 6.89 | 6.89 | 7.05 | 7.28 | 7.54 | 7.88 | 8.29 | 8.59 | 8.69 | +21 |
| 62 | 2.28 | 2.54 | 2.90 | 3.36 | 3.98 | 4.71 | 5.28 | 5.45 | 5.38 | 5.37 | 5.50 | 5.70 | 5.91 | 6.20 | 6.55 | 6.82 | 6.92 | |
| 64 | 1.78 | 1.99 | 2.25 | 2.59 | 3.06 | 3.63 | 4.09 | 4.23 | 4.17 | 4.16 | 4.27 | 4.43 | 4.60 | 4.85 | 5.16 | 5.40 | 5.50 | |
| 66 | 1.38 | 1.55 | 1.75 | 1.99 | 2.34 | 2.78 | 3.14 | 3.26 | 3.21 | 3.20 | 3.28 | 3.41 | 3.56 | 3.77 | 4.04 | 4.25 | 4.34 | |
| 68 | 1.07 | 1.20 | 1.35 | 1.53 | 1.78 | 2.11 | 2.39 | 2.48 | 2.44 | 2.43 | 2.50 | 2.60 | 2.73 | 2.91 | 3.14 | 3.33 | 3.41 | |
| 70 | 0.82 | 0.92 | 1.04 | 1.17 | 1.35 | 1.60 | 1.80 | 1.87 | 1.84 | 1.83 | 1.88 | 1.97 | 2.07 | 2.22 | 2.42 | 2.58 | 2.66 | |
| 72 | 0.62 | 0.70 | 0.79 | 0.89 | 1.03 | 1.20 | 1.35 | 1.39 | 1.37 | 1.36 | 1.41 | 1.47 | 1.56 | 1.68 | 1.85 | 1.99 | 2.05 | |
| 74 | 0.47 | 0.53 | 0.60 | 0.68 | 0.78 | 0.90 | 0.99 | 1.02 | 1.00 | 1.00 | 1.04 | 1.09 | 1.16 | 1.26 | 1.39 | 1.51 | 1.57 | |
| 76 | 0.35 | 0.40 | 0.45 | 0.51 | 0.58 | 0.66 | 0.72 | 0.73 | 0.72 | 0.73 | 0.76 | 0.80 | 0.85 | 0.93 | 1.04 | 1.14 | 1.18 | |
| 78 | 2.63 | 2.98 | 3.39 | 3.80 | 4.28 | 4.81 | 5.16 | 5.20 | 5.14 | 5.21 | 5.45 | 5.73 | 6.09 | 6.72 | 7.60 | 8.39 | 8.79 | +20 |
| 80 | 1.96 | 2.22 | 2.50 | 2.75 | 3.05 | 3.40 | 3.62 | 3.64 | 3.60 | 3.68 | 3.87 | 4.06 | 4.32 | 4.78 | 5.46 | 6.08 | 6.38 | |

52

ZONAL MEAN NUMBER DENSITY (/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **JULY** | | | | | | | | | | | | | | | | | | |
| 18 | 2.27 | 2.31 | 2.35 | 2.39 | 2.48 | 2.61 | 2.72 | 2.79 | 2.79 | 2.77 | 2.75 | 2.74 | 2.69 | 2.61 | 2.54 | 2.50 | 2.49 | +24 |
| 20 | 1.63 | 1.67 | 1.71 | 1.75 | 1.81 | 1.88 | 1.95 | 1.98 | 1.97 | 1.95 | 1.94 | 1.94 | 1.93 | 1.90 | 1.88 | 1.86 | 1.85 | |
| 22 | 1.08 | 1.15 | 1.22 | 1.28 | 1.32 | 1.36 | 1.39 | 1.40 | 1.40 | 1.39 | 1.38 | 1.39 | 1.39 | 1.39 | 1.38 | 1.38 | 1.37 | |
| 24 | 0.69 | 0.77 | 0.86 | 0.93 | 0.96 | 0.98 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.02 | 1.02 | 1.02 | 1.02 | |
| 26 | 4.50 | 5.13 | 5.96 | 6.69 | 7.07 | 7.17 | 7.19 | 7.21 | 7.22 | 7.22 | 7.24 | 7.32 | 7.42 | 7.47 | 7.48 | 7.50 | 7.55 | +23 |
| 28 | 2.98 | 3.45 | 4.15 | 4.81 | 5.19 | 5.27 | 5.24 | 5.23 | 5.25 | 5.27 | 5.30 | 5.36 | 5.44 | 5.49 | 5.51 | 5.54 | 5.60 | |
| 30 | 2.02 | 2.36 | 2.89 | 3.45 | 3.80 | 3.89 | 3.84 | 3.83 | 3.85 | 3.87 | 3.89 | 3.94 | 4.01 | 4.05 | 4.07 | 4.10 | 4.16 | |
| 32 | 1.41 | 1.65 | 2.03 | 2.47 | 2.78 | 2.87 | 2.83 | 2.82 | 2.83 | 2.85 | 2.87 | 2.91 | 2.96 | 3.00 | 3.01 | 3.05 | 3.10 | |
| 34 | 1.01 | 1.17 | 1.44 | 1.78 | 2.03 | 2.12 | 2.10 | 2.08 | 2.09 | 2.11 | 2.12 | 2.15 | 2.20 | 2.23 | 2.24 | 2.27 | 2.32 | |
| 36 | 0.73 | 0.84 | 1.04 | 1.28 | 1.48 | 1.56 | 1.56 | 1.55 | 1.56 | 1.57 | 1.58 | 1.60 | 1.63 | 1.66 | 1.68 | 1.70 | 1.74 | |
| 38 | 0.54 | 0.62 | 0.75 | 0.93 | 1.08 | 1.15 | 1.16 | 1.16 | 1.16 | 1.17 | 1.18 | 1.19 | 1.22 | 1.25 | 1.26 | 1.28 | 1.31 | |
| 40 | 4.00 | 4.56 | 5.54 | 6.81 | 7.94 | 8.54 | 8.68 | 8.68 | 8.70 | 8.75 | 8.82 | 8.97 | 9.20 | 9.42 | 9.59 | 9.75 | 9.92 | +22 |
| 42 | 3.00 | 3.41 | 4.12 | 5.04 | 5.87 | 6.36 | 6.53 | 6.55 | 6.56 | 6.59 | 6.65 | 6.78 | 6.97 | 7.17 | 7.33 | 7.46 | 7.57 | |
| 44 | 2.26 | 2.57 | 3.10 | 3.76 | 4.38 | 4.78 | 4.94 | 4.98 | 4.98 | 5.00 | 5.05 | 5.16 | 5.32 | 5.49 | 5.64 | 5.74 | 5.81 | |
| 46 | 1.71 | 1.96 | 2.35 | 2.84 | 3.30 | 3.62 | 3.78 | 3.81 | 3.81 | 3.82 | 3.86 | 3.95 | 4.09 | 4.24 | 4.37 | 4.46 | 4.50 | |
| 48 | 1.30 | 1.50 | 1.80 | 2.17 | 2.52 | 2.78 | 2.91 | 2.94 | 2.94 | 2.94 | 2.97 | 3.05 | 3.16 | 3.30 | 3.41 | 3.48 | 3.51 | |
| 50 | 1.00 | 1.15 | 1.39 | 1.67 | 1.94 | 2.15 | 2.26 | 2.29 | 2.28 | 2.28 | 2.31 | 2.37 | 2.47 | 2.58 | 2.68 | 2.73 | 2.75 | |
| 52 | 0.78 | 0.89 | 1.08 | 1.30 | 1.51 | 1.68 | 1.77 | 1.79 | 1.78 | 1.78 | 1.80 | 1.85 | 1.93 | 2.03 | 2.11 | 2.16 | 2.17 | |
| 54 | 0.61 | 0.70 | 0.84 | 1.01 | 1.18 | 1.31 | 1.39 | 1.40 | 1.39 | 1.39 | 1.41 | 1.46 | 1.52 | 1.60 | 1.67 | 1.71 | 1.72 | |
| 56 | 0.48 | 0.55 | 0.65 | 0.79 | 0.92 | 1.03 | 1.09 | 1.10 | 1.09 | 1.09 | 1.11 | 1.15 | 1.20 | 1.26 | 1.32 | 1.36 | 1.37 | |
| 58 | 0.38 | 0.43 | 0.51 | 0.61 | 0.72 | 0.81 | 0.86 | 0.87 | 0.86 | 0.86 | 0.87 | 0.90 | 0.94 | 1.00 | 1.05 | 1.08 | 1.09 | |
| 60 | 2.98 | 3.37 | 3.99 | 4.75 | 5.57 | 6.30 | 6.73 | 6.82 | 6.73 | 6.71 | 6.83 | 7.07 | 7.43 | 7.86 | 8.30 | 8.60 | 8.72 | +21 |
| 62 | 2.35 | 2.66 | 3.11 | 3.67 | 4.29 | 4.87 | 5.24 | 5.32 | 5.26 | 5.23 | 5.32 | 5.52 | 5.81 | 6.17 | 6.55 | 6.83 | 6.94 | |
| 64 | 1.85 | 2.08 | 2.42 | 2.82 | 3.28 | 3.74 | 4.05 | 4.13 | 4.08 | 4.05 | 4.12 | 4.28 | 4.51 | 4.82 | 5.16 | 5.40 | 5.51 | |
| 66 | 1.45 | 1.63 | 1.87 | 2.16 | 2.49 | 2.84 | 3.10 | 3.18 | 3.14 | 3.12 | 3.17 | 3.29 | 3.47 | 3.74 | 4.03 | 4.26 | 4.36 | |
| 68 | 1.12 | 1.26 | 1.44 | 1.64 | 1.88 | 2.15 | 2.35 | 2.42 | 2.40 | 2.38 | 2.41 | 2.50 | 2.65 | 2.87 | 3.13 | 3.34 | 3.43 | |
| 70 | 0.86 | 0.97 | 1.10 | 1.25 | 1.42 | 1.61 | 1.77 | 1.83 | 1.82 | 1.80 | 1.82 | 1.88 | 2.00 | 2.18 | 2.41 | 2.60 | 2.69 | |
| 72 | 0.66 | 0.74 | 0.84 | 0.94 | 1.06 | 1.20 | 1.32 | 1.36 | 1.36 | 1.35 | 1.36 | 1.40 | 1.49 | 1.65 | 1.84 | 2.00 | 2.08 | |
| 74 | 0.49 | 0.55 | 0.63 | 0.71 | 0.80 | 0.89 | 0.97 | 1.01 | 1.01 | 1.00 | 1.00 | 1.03 | 1.10 | 1.22 | 1.39 | 1.53 | 1.60 | |
| 76 | 0.37 | 0.41 | 0.47 | 0.53 | 0.59 | 0.66 | 0.71 | 0.73 | 0.73 | 0.73 | 0.73 | 0.75 | 0.80 | 0.90 | 1.03 | 1.14 | 1.20 | |
| 78 | 2.75 | 3.07 | 3.47 | 3.89 | 4.34 | 4.79 | 5.13 | 5.27 | 5.27 | 5.25 | 5.27 | 5.40 | 5.76 | 6.49 | 7.49 | 8.40 | 8.90 | +20 |
| 80 | 2.03 | 2.28 | 2.56 | 2.82 | 3.10 | 3.41 | 3.64 | 3.72 | 3.71 | 3.71 | 3.76 | 3.86 | 4.10 | 4.61 | 5.34 | 6.02 | 6.41 | |
| **AUGUST** | | | | | | | | | | | | | | | | | | |
| 18 | 2.47 | 2.43 | 2.39 | 2.39 | 2.47 | 2.62 | 2.75 | 2.81 | 2.81 | 2.78 | 2.75 | 2.72 | 2.67 | 2.60 | 2.53 | 2.48 | 2.46 | +24 |
| 20 | 1.75 | 1.75 | 1.74 | 1.75 | 1.80 | 1.90 | 1.97 | 2.00 | 1.99 | 1.97 | 1.95 | 1.94 | 1.93 | 1.90 | 1.87 | 1.84 | 1.83 | |
| 22 | 1.11 | 1.17 | 1.23 | 1.27 | 1.31 | 1.36 | 1.40 | 1.42 | 1.41 | 1.39 | 1.39 | 1.40 | 1.40 | 1.39 | 1.37 | 1.36 | 1.36 | |
| 24 | 0.69 | 0.76 | 0.86 | 0.92 | 0.96 | 0.99 | 1.00 | 1.01 | 1.00 | 1.00 | 1.00 | 1.01 | 1.02 | 1.01 | 1.01 | 1.01 | 1.00 | |
| 26 | 4.32 | 5.04 | 5.95 | 6.68 | 7.05 | 7.18 | 7.23 | 7.24 | 7.22 | 7.21 | 7.26 | 7.35 | 7.42 | 7.44 | 7.41 | 7.40 | 7.42 | +23 |
| 28 | 2.83 | 3.40 | 4.17 | 4.84 | 5.19 | 5.27 | 5.26 | 5.25 | 5.25 | 5.26 | 5.30 | 5.38 | 5.44 | 5.46 | 5.45 | 5.46 | 5.48 | |
| 30 | 1.93 | 2.35 | 2.95 | 3.51 | 3.82 | 3.89 | 3.86 | 3.83 | 3.84 | 3.86 | 3.89 | 3.95 | 4.00 | 4.03 | 4.02 | 4.03 | 4.05 | |
| 32 | 1.37 | 1.67 | 2.11 | 2.54 | 2.81 | 2.87 | 2.84 | 2.82 | 2.82 | 2.84 | 2.87 | 2.91 | 2.95 | 2.97 | 2.98 | 2.98 | 3.00 | |
| 34 | 1.00 | 1.21 | 1.52 | 1.85 | 2.07 | 2.12 | 2.10 | 2.08 | 2.09 | 2.10 | 2.12 | 2.15 | 2.18 | 2.21 | 2.21 | 2.22 | 2.23 | |
| 36 | 0.75 | 0.89 | 1.12 | 1.36 | 1.52 | 1.57 | 1.56 | 1.54 | 1.55 | 1.56 | 1.57 | 1.59 | 1.62 | 1.64 | 1.65 | 1.65 | 1.66 | |
| 38 | 0.56 | 0.67 | 0.83 | 1.00 | 1.12 | 1.16 | 1.16 | 1.15 | 1.15 | 1.16 | 1.17 | 1.19 | 1.21 | 1.23 | 1.24 | 1.24 | 1.25 | |
| 40 | 4.24 | 5.03 | 6.22 | 7.45 | 8.31 | 8.66 | 8.69 | 8.63 | 8.62 | 8.66 | 8.76 | 8.91 | 9.08 | 9.24 | 9.33 | 9.38 | 9.40 | +22 |
| 42 | 3.21 | 3.83 | 4.71 | 5.59 | 6.20 | 6.48 | 6.54 | 6.52 | 6.50 | 6.53 | 6.60 | 6.72 | 6.86 | 7.00 | 7.09 | 7.13 | 7.13 | |
| 44 | 2.44 | 2.93 | 3.60 | 4.23 | 4.66 | 4.88 | 4.96 | 4.96 | 4.94 | 4.95 | 5.01 | 5.11 | 5.22 | 5.34 | 5.43 | 5.46 | 5.45 | |
| 46 | 1.86 | 2.25 | 2.77 | 3.23 | 3.54 | 3.72 | 3.80 | 3.81 | 3.79 | 3.79 | 3.84 | 3.91 | 4.01 | 4.11 | 4.19 | 4.21 | 4.19 | |
| 48 | 1.43 | 1.74 | 2.14 | 2.49 | 2.71 | 2.85 | 2.93 | 2.95 | 2.93 | 2.93 | 2.96 | 3.02 | 3.10 | 3.18 | 3.25 | 3.27 | 3.25 | |
| 50 | 1.11 | 1.35 | 1.66 | 1.93 | 2.10 | 2.21 | 2.28 | 2.30 | 2.29 | 2.28 | 2.30 | 2.35 | 2.41 | 2.48 | 2.54 | 2.55 | 2.53 | |
| 52 | 0.87 | 1.06 | 1.30 | 1.50 | 1.63 | 1.73 | 1.79 | 1.81 | 1.80 | 1.78 | 1.79 | 1.83 | 1.88 | 1.94 | 1.99 | 2.00 | 1.98 | |
| 54 | 0.68 | 0.83 | 1.01 | 1.17 | 1.27 | 1.35 | 1.41 | 1.43 | 1.42 | 1.40 | 1.41 | 1.43 | 1.48 | 1.53 | 1.57 | 1.57 | 1.55 | |
| 56 | 0.54 | 0.65 | 0.79 | 0.91 | 0.99 | 1.06 | 1.11 | 1.13 | 1.12 | 1.10 | 1.10 | 1.12 | 1.16 | 1.20 | 1.23 | 1.24 | 1.22 | |
| 58 | 4.31 | 5.15 | 6.16 | 7.03 | 7.69 | 8.29 | 8.75 | 8.90 | 8.79 | 8.64 | 8.64 | 8.80 | 9.09 | 9.44 | 9.71 | 9.76 | 9.65 | +21 |
| 60 | 3.43 | 4.05 | 4.79 | 5.42 | 5.94 | 6.44 | 6.85 | 6.98 | 6.89 | 6.76 | 6.75 | 6.87 | 7.10 | 7.39 | 7.63 | 7.69 | 7.61 | |
| 62 | 2.71 | 3.17 | 3.71 | 4.15 | 4.55 | 4.96 | 5.32 | 5.44 | 5.37 | 5.26 | 5.25 | 5.34 | 5.52 | 5.75 | 5.97 | 6.05 | 6.00 | |
| 64 | 2.12 | 2.47 | 2.85 | 3.16 | 3.46 | 3.79 | 4.10 | 4.21 | 4.15 | 4.07 | 4.06 | 4.13 | 4.26 | 4.46 | 4.65 | 4.75 | 4.73 | |
| 66 | 1.65 | 1.90 | 2.18 | 2.39 | 2.61 | 2.88 | 3.13 | 3.23 | 3.19 | 3.13 | 3.12 | 3.17 | 3.26 | 3.43 | 3.61 | 3.71 | 3.72 | |
| 68 | 1.27 | 1.46 | 1.65 | 1.80 | 1.96 | 2.17 | 2.37 | 2.46 | 2.44 | 2.39 | 2.39 | 2.41 | 2.48 | 2.62 | 2.78 | 2.89 | 2.91 | |
| 70 | 0.96 | 1.10 | 1.25 | 1.35 | 1.46 | 1.62 | 1.78 | 1.86 | 1.85 | 1.82 | 1.81 | 1.82 | 1.87 | 1.98 | 2.13 | 2.24 | 2.27 | |
| 72 | 0.73 | 0.83 | 0.93 | 1.01 | 1.09 | 1.21 | 1.33 | 1.39 | 1.39 | 1.38 | 1.37 | 1.37 | 1.40 | 1.49 | 1.62 | 1.72 | 1.75 | |
| 74 | 0.55 | 0.62 | 0.69 | 0.75 | 0.81 | 0.90 | 0.99 | 1.03 | 1.04 | 1.03 | 1.02 | 1.02 | 1.04 | 1.11 | 1.21 | 1.30 | 1.34 | |
| 76 | 0.41 | 0.46 | 0.51 | 0.56 | 0.61 | 0.67 | 0.73 | 0.76 | 0.77 | 0.76 | 0.76 | 0.75 | 0.76 | 0.82 | 0.90 | 0.97 | 1.01 | |
| 78 | 3.04 | 3.40 | 3.79 | 4.11 | 4.46 | 4.90 | 5.31 | 5.51 | 5.54 | 5.54 | 5.52 | 5.47 | 5.55 | 5.92 | 6.55 | 7.13 | 7.42 | +20 |
| 80 | 2.20 | 2.51 | 2.81 | 3.01 | 3.23 | 3.53 | 3.80 | 3.90 | 3.90 | 3.91 | 3.94 | 3.93 | 3.98 | 4.23 | 4.67 | 5.10 | 5.31 | |

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ZONAL MEAN NUMBER DENSITY (/M CU)

| KM | LAT = -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

SEPTEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2.36 | 2.25 | 2.21 | 2.31 | 2.50 | 2.66 | 2.75 | 2.80 | 2.81 | 2.79 | 2.75 | 2.70 | 2.63 | 2.54 | 2.45 | 2.39 | 2.38 | +24 |
| 20 | 1.64 | 1.61 | 1.62 | 1.70 | 1.82 | 1.92 | 1.97 | 1.98 | 1.98 | 1.97 | 1.96 | 1.94 | 1.91 | 1.87 | 1.81 | 1.78 | 1.77 | |
| 22 | 1.06 | 1.10 | 1.16 | 1.25 | 1.33 | 1.38 | 1.40 | 1.40 | 1.40 | 1.39 | 1.39 | 1.39 | 1.38 | 1.36 | 1.33 | 1.31 | 1.30 | |
| 24 | 0.68 | 0.74 | 0.83 | 0.91 | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | 1.01 | 1.00 | 0.98 | 0.96 | 0.96 | |
| 26 | 4.44 | 5.09 | 5.95 | 6.71 | 7.13 | 7.24 | 7.23 | 7.20 | 7.17 | 7.17 | 7.22 | 7.29 | 7.33 | 7.28 | 7.18 | 7.09 | 7.06 | +23 |
| 28 | 3.01 | 3.55 | 4.28 | 4.91 | 5.24 | 5.30 | 5.25 | 5.22 | 5.21 | 5.22 | 5.26 | 5.32 | 5.36 | 5.34 | 5.27 | 5.21 | 5.19 | |
| 30 | 2.11 | 2.52 | 3.09 | 3.60 | 3.86 | 3.89 | 3.84 | 3.82 | 3.82 | 3.83 | 3.85 | 3.90 | 3.93 | 3.92 | 3.87 | 3.83 | 3.82 | |
| 32 | 1.54 | 1.84 | 2.25 | 2.64 | 2.84 | 2.86 | 2.83 | 2.81 | 2.81 | 2.82 | 2.84 | 2.87 | 2.89 | 2.88 | 2.85 | 2.82 | 2.81 | |
| 34 | 1.15 | 1.36 | 1.66 | 1.94 | 2.09 | 2.11 | 2.09 | 2.07 | 2.08 | 2.09 | 2.10 | 2.11 | 2.13 | 2.12 | 2.10 | 2.08 | 2.06 | |
| 36 | 0.87 | 1.02 | 1.23 | 1.43 | 1.54 | 1.57 | 1.55 | 1.54 | 1.54 | 1.55 | 1.56 | 1.57 | 1.57 | 1.57 | 1.55 | 1.53 | 1.52 | |
| 38 | 0.67 | 0.77 | 0.92 | 1.06 | 1.14 | 1.16 | 1.16 | 1.15 | 1.15 | 1.16 | 1.16 | 1.17 | 1.17 | 1.17 | 1.15 | 1.13 | 1.12 | |
| 40 | 5.15 | 5.93 | 6.96 | 7.89 | 8.45 | 8.67 | 8.70 | 8.66 | 8.65 | 8.66 | 8.70 | 8.74 | 8.75 | 8.71 | 8.60 | 8.43 | 8.27 | +22 |
| 42 | 3.98 | 4.56 | 5.30 | 5.93 | 6.32 | 6.51 | 6.58 | 6.57 | 6.54 | 6.55 | 6.57 | 6.59 | 6.59 | 6.56 | 6.46 | 6.31 | 6.15 | |
| 44 | 3.09 | 3.53 | 4.07 | 4.50 | 4.77 | 4.93 | 5.01 | 5.02 | 5.00 | 4.99 | 5.00 | 5.01 | 5.00 | 4.97 | 4.89 | 4.75 | 4.60 | |
| 46 | 2.40 | 2.74 | 3.14 | 3.44 | 3.63 | 3.77 | 3.85 | 3.87 | 3.85 | 3.84 | 3.84 | 3.84 | 3.83 | 3.80 | 3.73 | 3.61 | 3.47 | |
| 48 | 1.87 | 2.14 | 2.43 | 2.65 | 2.79 | 2.91 | 2.99 | 3.01 | 3.00 | 2.98 | 2.97 | 2.97 | 2.96 | 2.93 | 2.87 | 2.76 | 2.63 | |
| 50 | 1.47 | 1.67 | 1.89 | 2.05 | 2.16 | 2.26 | 2.33 | 2.36 | 2.35 | 2.33 | 2.32 | 2.31 | 2.30 | 2.28 | 2.22 | 2.12 | 2.01 | |
| 52 | 1.16 | 1.31 | 1.48 | 1.60 | 1.68 | 1.76 | 1.83 | 1.86 | 1.85 | 1.83 | 1.82 | 1.81 | 1.80 | 1.78 | 1.73 | 1.64 | 1.55 | |
| 54 | 0.92 | 1.03 | 1.15 | 1.24 | 1.31 | 1.38 | 1.44 | 1.47 | 1.46 | 1.44 | 1.43 | 1.42 | 1.41 | 1.40 | 1.35 | 1.28 | 1.20 | |
| 56 | 0.73 | 0.81 | 0.90 | 0.97 | 1.03 | 1.09 | 1.14 | 1.16 | 1.16 | 1.14 | 1.12 | 1.11 | 1.11 | 1.10 | 1.06 | 1.00 | 0.93 | |
| 58 | 5.81 | 6.35 | 6.97 | 7.50 | 7.98 | 8.49 | 8.95 | 9.16 | 9.11 | 8.95 | 8.80 | 8.72 | 8.68 | 8.57 | 8.27 | 7.77 | 7.26 | +21 |
| 60 | 4.60 | 4.97 | 5.40 | 5.78 | 6.18 | 6.61 | 7.00 | 7.18 | 7.14 | 7.00 | 6.87 | 6.81 | 6.77 | 6.68 | 6.44 | 6.05 | 5.66 | |
| 62 | 3.62 | 3.87 | 4.16 | 4.44 | 4.75 | 5.11 | 5.44 | 5.59 | 5.55 | 5.44 | 5.34 | 5.29 | 5.25 | 5.18 | 4.99 | 4.70 | 4.41 | |
| 64 | 2.83 | 3.00 | 3.19 | 3.38 | 3.63 | 3.93 | 4.19 | 4.31 | 4.29 | 4.20 | 4.12 | 4.08 | 4.05 | 3.98 | 3.84 | 3.63 | 3.42 | |
| 66 | 2.19 | 2.30 | 2.43 | 2.57 | 2.75 | 2.99 | 3.21 | 3.30 | 3.28 | 3.22 | 3.16 | 3.13 | 3.09 | 3.04 | 2.94 | 2.79 | 2.65 | |
| 68 | 1.68 | 1.76 | 1.84 | 1.94 | 2.08 | 2.27 | 2.44 | 2.51 | 2.50 | 2.45 | 2.42 | 2.38 | 2.35 | 2.30 | 2.23 | 2.13 | 2.04 | |
| 70 | 1.28 | 1.33 | 1.39 | 1.46 | 1.57 | 1.71 | 1.84 | 1.89 | 1.89 | 1.86 | 1.84 | 1.80 | 1.76 | 1.73 | 1.68 | 1.62 | 1.56 | |
| 72 | 0.96 | 1.00 | 1.04 | 1.09 | 1.18 | 1.29 | 1.38 | 1.42 | 1.42 | 1.41 | 1.39 | 1.36 | 1.32 | 1.29 | 1.26 | 1.22 | 1.18 | |
| 74 | 0.72 | 0.75 | 0.78 | 0.82 | 0.88 | 0.96 | 1.03 | 1.05 | 1.06 | 1.05 | 1.04 | 1.01 | 0.98 | 0.95 | 0.94 | 0.92 | 0.89 | |
| 76 | 5.40 | 5.57 | 5.80 | 6.13 | 6.61 | 7.16 | 7.57 | 7.74 | 7.78 | 7.81 | 7.74 | 7.50 | 7.19 | 6.99 | 6.90 | 6.79 | 6.63 | +20 |
| 78 | 3.99 | 4.13 | 4.31 | 4.55 | 4.89 | 5.27 | 5.52 | 5.60 | 5.62 | 5.67 | 5.65 | 5.48 | 5.23 | 5.09 | 5.04 | 4.97 | 4.85 | |
| 80 | 2.91 | 3.06 | 3.20 | 3.35 | 3.56 | 3.80 | 3.95 | 3.96 | 3.94 | 4.00 | 4.03 | 3.93 | 3.76 | 3.65 | 3.63 | 3.59 | 3.49 | |

OCTOBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2.29 | 2.26 | 2.28 | 2.39 | 2.55 | 2.68 | 2.75 | 2.78 | 2.79 | 2.78 | 2.75 | 2.68 | 2.59 | 2.48 | 2.38 | 2.31 | 2.28 | +24 |
| 20 | 1.64 | 1.64 | 1.68 | 1.76 | 1.85 | 1.92 | 1.95 | 1.96 | 1.97 | 1.97 | 1.96 | 1.93 | 1.88 | 1.82 | 1.75 | 1.71 | 1.69 | |
| 22 | 1.13 | 1.17 | 1.22 | 1.29 | 1.35 | 1.38 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.38 | 1.36 | 1.33 | 1.29 | 1.26 | 1.24 | |
| 24 | 7.67 | 8.21 | 8.90 | 9.51 | 9.86 | 9.96 | 9.93 | 9.89 | 9.88 | 9.90 | 9.93 | 9.94 | 9.87 | 9.70 | 9.46 | 9.25 | 9.12 | +23 |
| 26 | 5.27 | 5.80 | 6.46 | 6.98 | 7.22 | 7.23 | 7.17 | 7.12 | 7.10 | 7.12 | 7.16 | 7.19 | 7.18 | 7.09 | 6.93 | 6.78 | 6.68 | |
| 28 | 3.68 | 4.14 | 4.70 | 5.12 | 5.29 | 5.28 | 5.22 | 5.17 | 5.15 | 5.17 | 5.20 | 5.24 | 5.24 | 5.18 | 5.07 | 4.96 | 4.87 | |
| 30 | 2.63 | 3.00 | 3.43 | 3.75 | 3.87 | 3.87 | 3.82 | 3.78 | 3.77 | 3.78 | 3.81 | 3.84 | 3.83 | 3.78 | 3.70 | 3.61 | 3.54 | |
| 32 | 1.92 | 2.20 | 2.52 | 2.75 | 2.84 | 2.84 | 2.82 | 2.79 | 2.77 | 2.79 | 2.81 | 2.82 | 2.80 | 2.76 | 2.70 | 2.62 | 2.55 | |
| 34 | 1.43 | 1.63 | 1.86 | 2.02 | 2.08 | 2.10 | 2.08 | 2.06 | 2.05 | 2.06 | 2.08 | 2.08 | 2.06 | 2.02 | 1.97 | 1.90 | 1.84 | |
| 36 | 1.09 | 1.22 | 1.38 | 1.49 | 1.54 | 1.55 | 1.55 | 1.54 | 1.53 | 1.54 | 1.55 | 1.54 | 1.51 | 1.48 | 1.43 | 1.38 | 1.32 | |
| 38 | 0.83 | 0.93 | 1.03 | 1.10 | 1.14 | 1.15 | 1.16 | 1.15 | 1.15 | 1.15 | 1.16 | 1.15 | 1.12 | 1.09 | 1.05 | 1.00 | 0.95 | |
| 40 | 6.46 | 7.13 | 7.81 | 8.25 | 8.48 | 8.64 | 8.71 | 8.68 | 8.65 | 8.68 | 8.69 | 8.56 | 8.33 | 8.05 | 7.71 | 7.26 | 6.82 | +22 |
| 42 | 5.04 | 5.50 | 5.95 | 6.22 | 6.38 | 6.52 | 6.60 | 6.60 | 6.58 | 6.59 | 6.57 | 6.45 | 6.24 | 6.00 | 5.71 | 5.31 | 4.93 | |
| 44 | 3.96 | 4.28 | 4.57 | 4.74 | 4.85 | 4.96 | 5.05 | 5.06 | 5.04 | 5.04 | 5.01 | 4.89 | 4.71 | 4.51 | 4.26 | 3.92 | 3.60 | |
| 46 | 3.13 | 3.35 | 3.54 | 3.64 | 3.72 | 3.81 | 3.89 | 3.91 | 3.90 | 3.89 | 3.85 | 3.74 | 3.59 | 3.42 | 3.21 | 2.92 | 2.65 | |
| 48 | 2.47 | 2.63 | 2.76 | 2.83 | 2.88 | 2.96 | 3.02 | 3.05 | 3.04 | 3.02 | 2.98 | 2.88 | 2.76 | 2.62 | 2.44 | 2.19 | 1.97 | |
| 50 | 1.96 | 2.07 | 2.16 | 2.21 | 2.25 | 2.31 | 2.37 | 2.39 | 2.38 | 2.36 | 2.32 | 2.24 | 2.14 | 2.02 | 1.87 | 1.67 | 1.49 | |
| 52 | 1.56 | 1.64 | 1.70 | 1.73 | 1.76 | 1.81 | 1.86 | 1.88 | 1.88 | 1.86 | 1.82 | 1.75 | 1.67 | 1.57 | 1.44 | 1.28 | 1.13 | |
| 54 | 1.24 | 1.29 | 1.33 | 1.36 | 1.38 | 1.43 | 1.47 | 1.49 | 1.48 | 1.47 | 1.43 | 1.38 | 1.31 | 1.23 | 1.12 | 0.98 | 0.87 | |
| 56 | 0.98 | 1.02 | 1.05 | 1.07 | 1.09 | 1.12 | 1.16 | 1.17 | 1.17 | 1.16 | 1.13 | 1.08 | 1.03 | 0.96 | 0.87 | 0.76 | 0.68 | |
| 58 | 7.72 | 8.00 | 8.20 | 8.34 | 8.53 | 8.81 | 9.08 | 9.23 | 9.24 | 9.12 | 8.87 | 8.51 | 8.04 | 7.47 | 6.73 | 5.91 | 5.25 | +21 |
| 60 | 6.12 | 6.26 | 6.39 | 6.50 | 6.65 | 6.88 | 7.10 | 7.23 | 7.24 | 7.15 | 6.95 | 6.65 | 6.27 | 5.80 | 5.21 | 4.58 | 4.09 | |
| 62 | 4.79 | 4.88 | 4.96 | 5.03 | 5.16 | 5.34 | 5.52 | 5.63 | 5.64 | 5.57 | 5.41 | 5.17 | 4.86 | 4.48 | 4.02 | 3.54 | 3.18 | |
| 64 | 3.73 | 3.78 | 3.82 | 3.88 | 3.97 | 4.12 | 4.26 | 4.35 | 4.36 | 4.30 | 4.18 | 3.99 | 3.74 | 3.43 | 3.08 | 2.73 | 2.46 | |
| 66 | 2.88 | 2.91 | 2.93 | 2.97 | 3.04 | 3.16 | 3.27 | 3.33 | 3.34 | 3.30 | 3.21 | 3.06 | 2.86 | 2.61 | 2.34 | 2.09 | 1.90 | |
| 68 | 2.22 | 2.23 | 2.24 | 2.26 | 2.32 | 2.41 | 2.49 | 2.53 | 2.53 | 2.51 | 2.44 | 2.33 | 2.16 | 1.97 | 1.77 | 1.59 | 1.46 | |
| 70 | 1.69 | 1.70 | 1.70 | 1.72 | 1.76 | 1.83 | 1.89 | 1.91 | 1.91 | 1.89 | 1.85 | 1.76 | 1.63 | 1.48 | 1.34 | 1.21 | 1.12 | |
| 72 | 1.28 | 1.29 | 1.29 | 1.30 | 1.33 | 1.39 | 1.42 | 1.43 | 1.42 | 1.41 | 1.39 | 1.32 | 1.22 | 1.10 | 1.00 | 0.91 | 0.85 | |
| 74 | 0.97 | 0.97 | 0.97 | 0.98 | 1.00 | 1.04 | 1.06 | 1.06 | 1.05 | 1.05 | 1.04 | 0.99 | 0.90 | 0.82 | 0.75 | 0.69 | 0.64 | |
| 76 | 7.28 | 7.33 | 7.31 | 7.33 | 7.52 | 7.78 | 7.87 | 7.74 | 7.64 | 7.68 | 7.66 | 7.29 | 6.65 | 6.03 | 5.55 | 5.14 | 4.81 | +20 |
| 78 | 5.44 | 5.48 | 5.45 | 5.44 | 5.55 | 5.72 | 5.73 | 5.58 | 5.48 | 5.55 | 5.57 | 5.32 | 4.86 | 4.42 | 4.09 | 3.81 | 3.57 | |
| 80 | 4.03 | 4.06 | 4.03 | 3.99 | 4.02 | 4.10 | 4.07 | 3.93 | 3.86 | 3.92 | 3.97 | 3.82 | 3.50 | 3.20 | 2.98 | 2.78 | 2.60 | |

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ZONAL MEAN NUMBER DENSITY (/M CU)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **NOVEMBER** | | | | | | | | | | | | | | | | | | |
| 18 | 2.16 | 2.25 | 2.38 | 2.54 | 2.69 | 2.81 | 2.85 | 2.85 | 2.83 | 2.83 | 2.79 | 2.70 | 2.57 | 2.45 | 2.38 | 2.33 | 2.29 | +24 |
| 20 | 1.60 | 1.67 | 1.76 | 1.85 | 1.94 | 1.99 | 2.00 | 1.99 | 1.99 | 1.99 | 1.98 | 1.94 | 1.87 | 1.80 | 1.75 | 1.72 | 1.69 | |
| 22 | 1.17 | 1.22 | 1.29 | 1.35 | 1.39 | 1.41 | 1.41 | 1.40 | 1.40 | 1.40 | 1.40 | 1.38 | 1.35 | 1.31 | 1.28 | 1.26 | 1.24 | |
| 24 | 0.86 | 0.90 | 0.94 | 0.98 | 1.00 | 1.01 | 1.00 | 1.00 | 0.99 | 0.99 | 1.00 | 0.99 | 0.98 | 0.96 | 0.93 | 0.91 | 0.89 | |
| 26 | 6.31 | 6.57 | 6.89 | 7.14 | 7.25 | 7.24 | 7.18 | 7.12 | 7.09 | 7.10 | 7.12 | 7.13 | 7.08 | 6.95 | 6.76 | 6.54 | 6.41 | +23 |
| 28 | 4.65 | 4.84 | 5.04 | 5.19 | 5.25 | 5.23 | 5.18 | 5.14 | 5.11 | 5.11 | 5.14 | 5.16 | 5.14 | 5.04 | 4.89 | 4.71 | 4.56 | |
| 30 | 3.45 | 3.58 | 3.71 | 3.79 | 3.81 | 3.80 | 3.77 | 3.74 | 3.71 | 3.72 | 3.74 | 3.75 | 3.73 | 3.65 | 3.52 | 3.36 | 3.22 | |
| 32 | 2.58 | 2.66 | 2.74 | 2.78 | 2.78 | 2.78 | 2.76 | 2.74 | 2.72 | 2.73 | 2.74 | 2.74 | 2.71 | 2.64 | 2.53 | 2.39 | 2.27 | |
| 34 | 1.94 | 1.99 | 2.04 | 2.05 | 2.05 | 2.04 | 2.04 | 2.03 | 2.01 | 2.02 | 2.02 | 2.01 | 1.98 | 1.91 | 1.82 | 1.70 | 1.60 | |
| 36 | 1.47 | 1.50 | 1.53 | 1.52 | 1.51 | 1.52 | 1.52 | 1.51 | 1.50 | 1.50 | 1.50 | 1.49 | 1.45 | 1.39 | 1.31 | 1.21 | 1.13 | |
| 38 | 1.12 | 1.14 | 1.15 | 1.14 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.12 | 1.10 | 1.06 | 1.01 | 0.94 | 0.87 | 0.80 | |
| 40 | 8.57 | 8.74 | 8.77 | 8.65 | 8.54 | 8.53 | 8.56 | 8.55 | 8.53 | 8.53 | 8.46 | 8.23 | 7.85 | 7.39 | 6.85 | 6.24 | 5.72 | +22 |
| 42 | 6.61 | 6.73 | 6.73 | 6.61 | 6.51 | 6.49 | 6.51 | 6.51 | 6.50 | 6.50 | 6.42 | 6.19 | 5.85 | 5.46 | 5.01 | 4.53 | 4.13 | |
| 44 | 5.14 | 5.22 | 5.21 | 5.10 | 5.00 | 4.98 | 5.00 | 5.00 | 4.99 | 4.98 | 4.90 | 4.70 | 4.40 | 4.07 | 3.71 | 3.33 | 3.03 | |
| 46 | 4.02 | 4.08 | 4.06 | 3.97 | 3.89 | 3.86 | 3.87 | 3.86 | 3.86 | 3.85 | 3.78 | 3.60 | 3.34 | 3.06 | 2.77 | 2.48 | 2.25 | |
| 48 | 3.16 | 3.20 | 3.18 | 3.11 | 3.04 | 3.01 | 3.01 | 3.01 | 3.00 | 2.99 | 2.93 | 2.78 | 2.56 | 2.33 | 2.09 | 1.87 | 1.69 | |
| 50 | 2.50 | 2.53 | 2.51 | 2.45 | 2.39 | 2.37 | 2.36 | 2.35 | 2.35 | 2.34 | 2.28 | 2.16 | 1.98 | 1.79 | 1.60 | 1.42 | 1.29 | |
| 52 | 1.98 | 2.00 | 1.99 | 1.94 | 1.89 | 1.87 | 1.86 | 1.85 | 1.84 | 1.83 | 1.79 | 1.69 | 1.54 | 1.38 | 1.23 | 1.09 | 0.99 | |
| 54 | 1.58 | 1.59 | 1.58 | 1.54 | 1.50 | 1.48 | 1.46 | 1.45 | 1.45 | 1.44 | 1.41 | 1.32 | 1.20 | 1.07 | 0.95 | 0.85 | 0.77 | |
| 56 | 1.25 | 1.26 | 1.25 | 1.22 | 1.19 | 1.17 | 1.15 | 1.14 | 1.14 | 1.13 | 1.11 | 1.04 | 0.94 | 0.84 | 0.74 | 0.66 | 0.60 | |
| 58 | 1.00 | 1.00 | 0.99 | 0.96 | 0.94 | 0.92 | 0.91 | 0.90 | 0.89 | 0.89 | 0.87 | 0.81 | 0.73 | 0.65 | 0.58 | 0.51 | 0.47 | |
| 60 | 7.94 | 7.96 | 7.84 | 7.60 | 7.38 | 7.22 | 7.12 | 7.04 | 7.01 | 6.99 | 6.79 | 6.32 | 5.68 | 5.03 | 4.47 | 4.00 | 3.67 | +21 |
| 62 | 6.29 | 6.28 | 6.16 | 5.96 | 5.77 | 5.64 | 5.55 | 5.49 | 5.47 | 5.45 | 5.29 | 4.90 | 4.38 | 3.88 | 3.45 | 3.10 | 2.85 | |
| 64 | 4.96 | 4.93 | 4.81 | 4.64 | 4.49 | 4.38 | 4.30 | 4.25 | 4.24 | 4.23 | 4.09 | 3.78 | 3.36 | 2.97 | 2.65 | 2.39 | 2.21 | |
| 66 | 3.88 | 3.84 | 3.73 | 3.59 | 3.47 | 3.38 | 3.31 | 3.27 | 3.27 | 3.26 | 3.15 | 2.89 | 2.56 | 2.26 | 2.03 | 1.83 | 1.69 | |
| 68 | 3.02 | 2.97 | 2.87 | 2.75 | 2.66 | 2.59 | 2.53 | 2.50 | 2.49 | 2.49 | 2.40 | 2.20 | 1.94 | 1.72 | 1.54 | 1.40 | 1.29 | |
| 70 | 2.33 | 2.28 | 2.20 | 2.10 | 2.02 | 1.97 | 1.93 | 1.89 | 1.88 | 1.88 | 1.81 | 1.66 | 1.46 | 1.29 | 1.17 | 1.06 | 0.98 | |
| 72 | 1.79 | 1.74 | 1.67 | 1.58 | 1.53 | 1.49 | 1.45 | 1.42 | 1.40 | 1.40 | 1.36 | 1.24 | 1.10 | 0.97 | 0.88 | 0.80 | 0.74 | |
| 74 | 1.36 | 1.32 | 1.25 | 1.19 | 1.14 | 1.12 | 1.08 | 1.05 | 1.03 | 1.04 | 1.01 | 0.93 | 0.82 | 0.73 | 0.66 | 0.60 | 0.56 | |
| 76 | 1.02 | 0.99 | 0.94 | 0.88 | 0.85 | 0.83 | 0.80 | 0.77 | 0.75 | 0.75 | 0.74 | 0.69 | 0.61 | 0.54 | 0.49 | 0.45 | 0.42 | |
| 78 | 7.64 | 7.40 | 6.94 | 6.48 | 6.19 | 6.03 | 5.80 | 5.52 | 5.38 | 5.41 | 5.36 | 5.01 | 4.47 | 4.02 | 3.68 | 3.36 | 3.08 | +20 |
| 80 | 5.64 | 5.46 | 5.10 | 4.71 | 4.45 | 4.30 | 4.12 | 3.90 | 3.79 | 3.82 | 3.81 | 3.59 | 3.24 | 2.93 | 2.70 | 2.47 | 2.27 | |
| **DECEMBER** | | | | | | | | | | | | | | | | | | |
| 18 | 2.28 | 2.32 | 2.41 | 2.54 | 2.70 | 2.83 | 2.88 | 2.87 | 2.84 | 2.83 | 2.80 | 2.69 | 2.55 | 2.43 | 2.35 | 2.32 | 2.31 | +24 |
| 20 | 1.70 | 1.72 | 1.77 | 1.85 | 1.93 | 1.99 | 2.01 | 2.00 | 1.99 | 2.00 | 1.98 | 1.93 | 1.85 | 1.78 | 1.73 | 1.70 | 1.69 | |
| 22 | 1.26 | 1.28 | 1.30 | 1.34 | 1.39 | 1.41 | 1.41 | 1.41 | 1.40 | 1.41 | 1.40 | 1.38 | 1.33 | 1.29 | 1.25 | 1.23 | 1.21 | |
| 24 | 0.93 | 0.94 | 0.96 | 0.98 | 1.00 | 1.01 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 0.96 | 0.94 | 0.91 | 0.88 | 0.85 | |
| 26 | 6.94 | 6.98 | 7.05 | 7.13 | 7.20 | 7.22 | 7.19 | 7.14 | 7.12 | 7.11 | 7.10 | 7.05 | 6.96 | 6.80 | 6.56 | 6.24 | 5.95 | +23 |
| 28 | 5.17 | 5.18 | 5.19 | 5.21 | 5.22 | 5.22 | 5.19 | 5.15 | 5.12 | 5.11 | 5.10 | 5.09 | 5.05 | 4.95 | 4.73 | 4.42 | 4.14 | |
| 30 | 3.86 | 3.85 | 3.84 | 3.82 | 3.81 | 3.79 | 3.77 | 3.74 | 3.72 | 3.70 | 3.70 | 3.69 | 3.68 | 3.60 | 3.41 | 3.13 | 2.88 | |
| 32 | 2.90 | 2.88 | 2.85 | 2.82 | 2.80 | 2.78 | 2.76 | 2.74 | 2.72 | 2.71 | 2.70 | 2.70 | 2.68 | 2.62 | 2.45 | 2.22 | 2.01 | |
| 34 | 2.18 | 2.16 | 2.13 | 2.10 | 2.07 | 2.05 | 2.03 | 2.02 | 2.01 | 2.00 | 1.99 | 1.98 | 1.96 | 1.90 | 1.77 | 1.58 | 1.41 | |
| 36 | 1.65 | 1.63 | 1.60 | 1.57 | 1.54 | 1.53 | 1.51 | 1.50 | 1.49 | 1.49 | 1.48 | 1.47 | 1.44 | 1.39 | 1.27 | 1.13 | 1.00 | |
| 38 | 1.26 | 1.24 | 1.22 | 1.19 | 1.16 | 1.14 | 1.13 | 1.12 | 1.12 | 1.11 | 1.11 | 1.09 | 1.06 | 1.01 | 0.92 | 0.81 | 0.72 | |
| 40 | 9.61 | 9.50 | 9.29 | 9.03 | 8.82 | 8.66 | 8.55 | 8.48 | 8.44 | 8.41 | 8.34 | 8.18 | 7.89 | 7.41 | 6.69 | 5.85 | 5.18 | +22 |
| 42 | 7.40 | 7.32 | 7.15 | 6.94 | 6.75 | 6.61 | 6.51 | 6.44 | 6.41 | 6.40 | 6.34 | 6.18 | 5.90 | 5.47 | 4.89 | 4.27 | 3.80 | |
| 44 | 5.74 | 5.68 | 5.54 | 5.37 | 5.21 | 5.08 | 4.99 | 4.93 | 4.90 | 4.90 | 4.85 | 4.71 | 4.45 | 4.07 | 3.61 | 3.15 | 2.81 | |
| 46 | 4.48 | 4.43 | 4.33 | 4.18 | 4.05 | 3.94 | 3.85 | 3.79 | 3.77 | 3.77 | 3.74 | 3.62 | 3.38 | 3.06 | 2.69 | 2.35 | 2.10 | |
| 48 | 3.52 | 3.48 | 3.40 | 3.28 | 3.16 | 3.07 | 2.99 | 2.94 | 2.92 | 2.92 | 2.90 | 2.80 | 2.60 | 2.32 | 2.02 | 1.77 | 1.59 | |
| 50 | 2.78 | 2.75 | 2.68 | 2.59 | 2.49 | 2.41 | 2.34 | 2.29 | 2.27 | 2.27 | 2.26 | 2.18 | 2.01 | 1.78 | 1.54 | 1.34 | 1.21 | |
| 52 | 2.21 | 2.18 | 2.13 | 2.05 | 1.96 | 1.89 | 1.83 | 1.79 | 1.77 | 1.77 | 1.77 | 1.71 | 1.56 | 1.37 | 1.18 | 1.03 | 0.93 | |
| 54 | 1.76 | 1.74 | 1.69 | 1.62 | 1.55 | 1.49 | 1.44 | 1.40 | 1.38 | 1.39 | 1.39 | 1.34 | 1.22 | 1.06 | 0.91 | 0.79 | 0.72 | |
| 56 | 1.40 | 1.39 | 1.35 | 1.29 | 1.23 | 1.18 | 1.14 | 1.10 | 1.08 | 1.09 | 1.09 | 1.05 | 0.95 | 0.82 | 0.70 | 0.61 | 0.56 | |
| 58 | 1.12 | 1.11 | 1.07 | 1.02 | 0.98 | 0.93 | 0.89 | 0.86 | 0.85 | 0.86 | 0.86 | 0.82 | 0.74 | 0.64 | 0.54 | 0.48 | 0.43 | |
| 60 | 9.00 | 8.85 | 8.53 | 8.11 | 7.71 | 7.36 | 7.04 | 6.78 | 6.68 | 6.72 | 6.70 | 6.37 | 5.70 | 4.91 | 4.22 | 3.69 | 3.37 | +21 |
| 62 | 7.19 | 7.05 | 6.76 | 6.40 | 6.06 | 5.78 | 5.52 | 5.31 | 5.24 | 5.27 | 5.23 | 4.93 | 4.38 | 3.77 | 3.25 | 2.86 | 2.62 | |
| 64 | 5.73 | 5.59 | 5.33 | 5.02 | 4.74 | 4.51 | 4.30 | 4.14 | 4.09 | 4.12 | 4.06 | 3.79 | 3.34 | 2.88 | 2.50 | 2.22 | 2.03 | |
| 66 | 4.54 | 4.41 | 4.18 | 3.91 | 3.68 | 3.50 | 3.33 | 3.21 | 3.18 | 3.20 | 3.14 | 2.89 | 2.53 | 2.18 | 1.91 | 1.71 | 1.57 | |
| 68 | 3.57 | 3.46 | 3.26 | 3.03 | 2.84 | 2.69 | 2.56 | 2.47 | 2.45 | 2.47 | 2.41 | 2.20 | 1.91 | 1.65 | 1.45 | 1.31 | 1.21 | |
| 70 | 2.79 | 2.69 | 2.51 | 2.32 | 2.16 | 2.04 | 1.95 | 1.88 | 1.87 | 1.88 | 1.83 | 1.66 | 1.43 | 1.24 | 1.10 | 1.00 | 0.92 | |
| 72 | 2.16 | 2.07 | 1.92 | 1.76 | 1.63 | 1.54 | 1.46 | 1.41 | 1.41 | 1.42 | 1.38 | 1.24 | 1.07 | 0.93 | 0.83 | 0.76 | 0.70 | |
| 74 | 1.65 | 1.57 | 1.45 | 1.31 | 1.21 | 1.14 | 1.09 | 1.05 | 1.05 | 1.06 | 1.02 | 0.92 | 0.80 | 0.70 | 0.63 | 0.57 | 0.52 | |
| 76 | 1.24 | 1.18 | 1.08 | 0.97 | 0.89 | 0.84 | 0.80 | 0.77 | 0.76 | 0.77 | 0.75 | 0.68 | 0.59 | 0.52 | 0.47 | 0.43 | 0.39 | |
| 78 | 9.24 | 8.77 | 7.95 | 7.08 | 6.44 | 6.06 | 5.77 | 5.55 | 5.50 | 5.55 | 5.44 | 4.97 | 4.36 | 3.86 | 3.51 | 3.20 | 2.93 | +20 |
| 80 | 6.75 | 6.39 | 5.76 | 5.08 | 4.61 | 4.33 | 4.12 | 3.95 | 3.88 | 3.92 | 3.85 | 3.56 | 3.15 | 2.82 | 2.58 | 2.37 | 2.18 | |

ZONAL MEAN PRESSURE SCALE HT (KM)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

JANUARY

| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.83 | 6.80 | 6.69 | 6.49 | 6.25 | 6.07 | 5.98 | 5.96 | 5.96 | 5.98 | 6.04 | 6.18 | 6.32 | 6.37 | 6.27 | 6.07 | 5.90 |
| 20 | 6.85 | 6.82 | 6.72 | 6.56 | 6.37 | 6.23 | 6.14 | 6.10 | 6.07 | 6.06 | 6.10 | 6.21 | 6.34 | 6.37 | 6.24 | 6.00 | 5.79 |
| 22 | 6.90 | 6.87 | 6.79 | 6.64 | 6.49 | 6.36 | 6.29 | 6.24 | 6.21 | 6.19 | 6.23 | 6.32 | 6.42 | 6.43 | 6.28 | 6.03 | 5.81 |
| 24 | 6.98 | 6.95 | 6.88 | 6.75 | 6.61 | 6.50 | 6.42 | 6.38 | 6.36 | 6.35 | 6.37 | 6.44 | 6.51 | 6.50 | 6.36 | 6.13 | 5.93 |
| 26 | 7.08 | 7.05 | 6.98 | 6.87 | 6.74 | 6.63 | 6.56 | 6.52 | 6.51 | 6.51 | 6.53 | 6.56 | 6.60 | 6.57 | 6.45 | 6.27 | 6.09 |
| 28 | 7.19 | 7.17 | 7.11 | 7.00 | 6.88 | 6.77 | 6.70 | 6.66 | 6.66 | 6.66 | 6.67 | 6.68 | 6.68 | 6.65 | 6.56 | 6.42 | 6.29 |
| 30 | 7.31 | 7.30 | 7.25 | 7.15 | 7.03 | 6.92 | 6.84 | 6.81 | 6.81 | 6.82 | 6.82 | 6.79 | 6.76 | 6.73 | 6.67 | 6.58 | 6.49 |
| 32 | 7.45 | 7.44 | 7.40 | 7.30 | 7.18 | 7.07 | 7.00 | 6.96 | 6.96 | 6.97 | 6.96 | 6.91 | 6.86 | 6.82 | 6.78 | 6.74 | 6.68 |
| 34 | 7.59 | 7.59 | 7.55 | 7.46 | 7.34 | 7.24 | 7.16 | 7.12 | 7.12 | 7.13 | 7.11 | 7.04 | 6.97 | 6.92 | 6.90 | 6.88 | 6.85 |
| 36 | 7.75 | 7.75 | 7.71 | 7.62 | 7.51 | 7.40 | 7.32 | 7.27 | 7.27 | 7.28 | 7.26 | 7.19 | 7.10 | 7.04 | 7.03 | 7.02 | 7.00 |
| 38 | 7.91 | 7.91 | 7.87 | 7.77 | 7.66 | 7.56 | 7.47 | 7.43 | 7.42 | 7.44 | 7.42 | 7.34 | 7.24 | 7.18 | 7.15 | 7.14 | 7.12 |
| 40 | 8.07 | 8.06 | 8.01 | 7.92 | 7.81 | 7.71 | 7.62 | 7.58 | 7.57 | 7.59 | 7.57 | 7.50 | 7.39 | 7.31 | 7.27 | 7.24 | 7.22 |
| 42 | 8.21 | 8.20 | 8.14 | 8.05 | 7.94 | 7.84 | 7.76 | 7.71 | 7.71 | 7.73 | 7.72 | 7.65 | 7.54 | 7.44 | 7.37 | 7.33 | 7.31 |
| 44 | 8.34 | 8.32 | 8.25 | 8.15 | 8.04 | 7.95 | 7.87 | 7.83 | 7.83 | 7.85 | 7.85 | 7.77 | 7.66 | 7.54 | 7.46 | 7.41 | 7.38 |
| 46 | 8.44 | 8.41 | 8.33 | 8.22 | 8.11 | 8.02 | 7.96 | 7.93 | 7.93 | 7.95 | 7.94 | 7.86 | 7.73 | 7.60 | 7.51 | 7.47 | 7.45 |
| 48 | 8.51 | 8.46 | 8.37 | 8.25 | 8.14 | 8.06 | 8.01 | 7.99 | 8.00 | 8.01 | 8.00 | 7.90 | 7.76 | 7.62 | 7.54 | 7.51 | 7.51 |
| 50 | 8.53 | 8.47 | 8.37 | 8.24 | 8.13 | 8.06 | 8.02 | 8.02 | 8.03 | 8.04 | 8.00 | 7.89 | 7.73 | 7.59 | 7.53 | 7.53 | 7.56 |
| 52 | 8.52 | 8.45 | 8.32 | 8.18 | 8.07 | 8.01 | 8.00 | 8.01 | 8.02 | 8.02 | 7.96 | 7.82 | 7.65 | 7.52 | 7.48 | 7.53 | 7.60 |
| 54 | 8.46 | 8.38 | 8.24 | 8.09 | 7.98 | 7.92 | 7.93 | 7.95 | 7.98 | 7.96 | 7.87 | 7.71 | 7.52 | 7.41 | 7.41 | 7.50 | 7.62 |
| 56 | 8.36 | 8.27 | 8.12 | 7.96 | 7.84 | 7.79 | 7.82 | 7.86 | 7.89 | 7.87 | 7.75 | 7.56 | 7.37 | 7.28 | 7.31 | 7.45 | 7.60 |
| 58 | 8.22 | 8.12 | 7.97 | 7.79 | 7.67 | 7.63 | 7.67 | 7.73 | 7.77 | 7.73 | 7.60 | 7.40 | 7.22 | 7.14 | 7.21 | 7.38 | 7.56 |
| 60 | 8.04 | 7.95 | 7.78 | 7.60 | 7.47 | 7.44 | 7.49 | 7.57 | 7.62 | 7.57 | 7.43 | 7.23 | 7.07 | 7.01 | 7.10 | 7.28 | 7.47 |
| 62 | 7.84 | 7.74 | 7.57 | 7.38 | 7.25 | 7.23 | 7.30 | 7.39 | 7.43 | 7.39 | 7.25 | 7.08 | 6.93 | 6.90 | 6.99 | 7.17 | 7.35 |
| 64 | 7.61 | 7.51 | 7.34 | 7.15 | 7.03 | 7.01 | 7.09 | 7.18 | 7.23 | 7.19 | 7.08 | 6.93 | 6.82 | 6.80 | 6.90 | 7.06 | 7.21 |
| 66 | 7.35 | 7.26 | 7.10 | 6.91 | 6.80 | 6.80 | 6.88 | 6.97 | 7.01 | 6.98 | 6.90 | 6.80 | 6.73 | 6.73 | 6.82 | 6.95 | 7.06 |
| 68 | 7.07 | 6.99 | 6.84 | 6.67 | 6.58 | 6.59 | 6.67 | 6.75 | 6.78 | 6.77 | 6.73 | 6.68 | 6.66 | 6.68 | 6.75 | 6.84 | 6.92 |
| 70 | 6.76 | 6.69 | 6.56 | 6.43 | 6.37 | 6.40 | 6.48 | 6.54 | 6.56 | 6.56 | 6.56 | 6.57 | 6.59 | 6.64 | 6.70 | 6.76 | 6.80 |
| 72 | 6.43 | 6.38 | 6.28 | 6.20 | 6.18 | 6.23 | 6.30 | 6.34 | 6.34 | 6.35 | 6.39 | 6.45 | 6.52 | 6.59 | 6.66 | 6.70 | 6.71 |
| 74 | 6.08 | 6.05 | 6.00 | 5.92 | 6.00 | 6.09 | 6.15 | 6.16 | 6.16 | 6.16 | 6.23 | 6.32 | 6.43 | 6.53 | 6.62 | 6.66 | 6.66 |
| 76 | 5.73 | 5.71 | 5.70 | 5.74 | 5.84 | 5.97 | 6.04 | 6.02 | 5.99 | 6.00 | 6.08 | 6.20 | 6.33 | 6.47 | 6.59 | 6.65 | 6.65 |
| 78 | 5.39 | 5.38 | 5.41 | 5.52 | 5.69 | 5.87 | 5.96 | 5.94 | 5.90 | 5.91 | 5.99 | 6.11 | 6.25 | 6.42 | 6.57 | 6.65 | 6.64 |
| 80 | 5.06 | 5.06 | 5.13 | 5.30 | 5.55 | 5.80 | 5.93 | 5.94 | 5.91 | 5.92 | 5.98 | 6.10 | 6.26 | 6.44 | 6.58 | 6.62 | 6.58 |

FEBRUARY

| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.74 | 6.71 | 6.61 | 6.46 | 6.28 | 6.11 | 6.00 | 5.94 | 5.92 | 5.94 | 6.01 | 6.15 | 6.31 | 6.41 | 6.39 | 6.28 | 6.17 |
| 20 | 6.74 | 6.70 | 6.62 | 6.50 | 6.35 | 6.22 | 6.12 | 6.05 | 6.01 | 6.00 | 6.05 | 6.17 | 6.32 | 6.41 | 6.37 | 6.21 | 6.05 |
| 22 | 6.77 | 6.74 | 6.68 | 6.57 | 6.45 | 6.34 | 6.26 | 6.20 | 6.16 | 6.15 | 6.18 | 6.27 | 6.38 | 6.44 | 6.39 | 6.25 | 6.09 |
| 24 | 6.83 | 6.81 | 6.76 | 6.66 | 6.56 | 6.47 | 6.41 | 6.36 | 6.33 | 6.32 | 6.35 | 6.40 | 6.45 | 6.47 | 6.43 | 6.33 | 6.21 |
| 26 | 6.90 | 6.90 | 6.86 | 6.77 | 6.68 | 6.61 | 6.56 | 6.52 | 6.50 | 6.51 | 6.53 | 6.53 | 6.53 | 6.51 | 6.48 | 6.42 | 6.36 |
| 28 | 6.99 | 7.01 | 6.97 | 6.89 | 6.81 | 6.76 | 6.72 | 6.68 | 6.67 | 6.69 | 6.70 | 6.67 | 6.61 | 6.56 | 6.54 | 6.52 | 6.49 |
| 30 | 7.11 | 7.13 | 7.09 | 7.02 | 6.95 | 6.91 | 6.87 | 6.84 | 6.84 | 6.86 | 6.86 | 6.80 | 6.71 | 6.63 | 6.61 | 6.61 | 6.60 |
| 32 | 7.23 | 7.25 | 7.23 | 7.16 | 7.10 | 7.06 | 7.03 | 7.01 | 7.00 | 7.03 | 7.03 | 6.94 | 6.82 | 6.73 | 6.69 | 6.69 | 6.68 |
| 34 | 7.37 | 7.39 | 7.37 | 7.31 | 7.26 | 7.22 | 7.20 | 7.17 | 7.18 | 7.20 | 7.19 | 7.10 | 6.96 | 6.84 | 6.79 | 6.77 | 6.75 |
| 36 | 7.52 | 7.54 | 7.52 | 7.47 | 7.42 | 7.38 | 7.36 | 7.35 | 7.35 | 7.37 | 7.35 | 7.26 | 7.11 | 6.98 | 6.90 | 6.85 | 6.81 |
| 38 | 7.67 | 7.68 | 7.67 | 7.63 | 7.58 | 7.54 | 7.52 | 7.52 | 7.54 | 7.55 | 7.52 | 7.42 | 7.28 | 7.13 | 7.02 | 6.93 | 6.88 |
| 40 | 7.82 | 7.83 | 7.82 | 7.78 | 7.73 | 7.69 | 7.67 | 7.69 | 7.71 | 7.72 | 7.69 | 7.59 | 7.45 | 7.29 | 7.14 | 7.03 | 6.96 |
| 42 | 7.95 | 7.95 | 7.95 | 7.91 | 7.86 | 7.81 | 7.81 | 7.84 | 7.88 | 7.89 | 7.84 | 7.74 | 7.60 | 7.43 | 7.26 | 7.13 | 7.05 |
| 44 | 8.07 | 8.06 | 8.05 | 8.02 | 7.96 | 7.91 | 7.92 | 7.97 | 8.02 | 8.02 | 7.97 | 7.87 | 7.72 | 7.54 | 7.37 | 7.24 | 7.18 |
| 46 | 8.16 | 8.15 | 8.13 | 8.09 | 8.03 | 7.98 | 7.99 | 8.05 | 8.12 | 8.12 | 8.06 | 7.95 | 7.80 | 7.62 | 7.46 | 7.35 | 7.32 |
| 48 | 8.21 | 8.20 | 8.17 | 8.12 | 8.06 | 8.01 | 8.02 | 8.10 | 8.16 | 8.17 | 8.09 | 7.97 | 7.82 | 7.65 | 7.52 | 7.46 | 7.47 |
| 50 | 8.24 | 8.21 | 8.17 | 8.11 | 8.04 | 7.99 | 8.01 | 8.09 | 8.16 | 8.16 | 8.08 | 7.94 | 7.78 | 7.63 | 7.55 | 7.56 | 7.62 |
| 52 | 8.23 | 8.18 | 8.12 | 8.04 | 7.97 | 7.94 | 7.96 | 8.03 | 8.09 | 8.09 | 8.00 | 7.86 | 7.69 | 7.57 | 7.54 | 7.63 | 7.76 |
| 54 | 8.18 | 8.12 | 8.03 | 7.93 | 7.86 | 7.84 | 7.87 | 7.94 | 7.98 | 7.97 | 7.88 | 7.73 | 7.56 | 7.46 | 7.50 | 7.66 | 7.86 |
| 56 | 8.10 | 8.02 | 7.90 | 7.78 | 7.71 | 7.71 | 7.75 | 7.80 | 7.83 | 7.82 | 7.73 | 7.57 | 7.41 | 7.34 | 7.43 | 7.66 | 7.91 |
| 58 | 7.98 | 7.89 | 7.74 | 7.60 | 7.54 | 7.56 | 7.61 | 7.65 | 7.66 | 7.64 | 7.55 | 7.40 | 7.25 | 7.21 | 7.34 | 7.61 | 7.89 |
| 60 | 7.84 | 7.73 | 7.56 | 7.41 | 7.35 | 7.38 | 7.45 | 7.48 | 7.48 | 7.44 | 7.36 | 7.22 | 7.10 | 7.09 | 7.24 | 7.53 | 7.82 |
| 62 | 7.66 | 7.54 | 7.36 | 7.20 | 7.15 | 7.20 | 7.27 | 7.30 | 7.28 | 7.25 | 7.17 | 7.06 | 6.96 | 6.97 | 7.14 | 7.42 | 7.68 |
| 64 | 7.45 | 7.33 | 7.15 | 7.00 | 6.95 | 7.01 | 7.09 | 7.12 | 7.09 | 7.05 | 7.00 | 6.92 | 6.85 | 6.88 | 7.04 | 7.28 | 7.50 |
| 66 | 7.22 | 7.10 | 6.93 | 6.79 | 6.75 | 6.82 | 6.90 | 6.93 | 6.90 | 6.87 | 6.84 | 6.79 | 6.76 | 6.80 | 6.94 | 7.14 | 7.31 |
| 68 | 6.95 | 6.85 | 6.70 | 6.58 | 6.56 | 6.64 | 6.72 | 6.74 | 6.72 | 6.69 | 6.69 | 6.68 | 6.68 | 6.74 | 6.86 | 7.00 | 7.11 |
| 70 | 6.66 | 6.59 | 6.47 | 6.39 | 6.39 | 6.46 | 6.53 | 6.54 | 6.52 | 6.52 | 6.54 | 6.57 | 6.61 | 6.68 | 6.79 | 6.88 | 6.94 |
| 72 | 6.36 | 6.31 | 6.23 | 6.19 | 6.22 | 6.29 | 6.35 | 6.34 | 6.33 | 6.35 | 6.40 | 6.46 | 6.53 | 6.62 | 6.72 | 6.78 | 6.80 |
| 74 | 6.05 | 6.02 | 5.99 | 6.00 | 6.07 | 6.14 | 6.17 | 6.15 | 6.14 | 6.19 | 6.26 | 6.34 | 6.43 | 6.54 | 6.66 | 6.71 | 6.70 |
| 76 | 5.75 | 5.74 | 5.75 | 5.82 | 5.92 | 6.01 | 6.02 | 5.98 | 5.98 | 6.04 | 6.13 | 6.22 | 6.32 | 6.46 | 6.60 | 6.66 | 6.63 |
| 78 | 5.49 | 5.48 | 5.52 | 5.64 | 5.80 | 5.91 | 5.92 | 5.87 | 5.87 | 5.94 | 6.03 | 6.11 | 6.22 | 6.38 | 6.55 | 6.42 | 6.58 |
| 80 | 5.28 | 5.26 | 5.32 | 5.48 | 5.69 | 5.85 | 5.89 | 5.88 | 5.89 | 5.94 | 6.00 | 6.07 | 6.19 | 6.37 | 6.53 | 6.56 | 6.49 |

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ZONAL MEAN PRESSURE SCALE HT (KM)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MARCH** | | | | | | | | | | | | | | | | | |
| 18 | 6.58 | 6.58 | 6.54 | 6.44 | 6.30 | 6.16 | 6.04 | 5.97 | 5.94 | 5.98 | 6.07 | 6.19 | 6.31 | 6.41 | 6.45 | 6.46 | 6.46 |
| 20 | 6.54 | 6.54 | 6.52 | 6.45 | 6.34 | 6.23 | 6.14 | 6.08 | 6.05 | 6.07 | 6.13 | 6.23 | 6.33 | 6.40 | 6.42 | 6.41 | 6.39 |
| 22 | 6.52 | 6.55 | 6.54 | 6.49 | 6.41 | 6.34 | 6.29 | 6.24 | 6.21 | 6.22 | 6.26 | 6.32 | 6.37 | 6.40 | 6.41 | 6.42 | 6.43 |
| 24 | 6.54 | 6.57 | 6.58 | 6.54 | 6.50 | 6.47 | 6.44 | 6.41 | 6.38 | 6.39 | 6.42 | 6.44 | 6.43 | 6.42 | 6.42 | 6.46 | 6.50 |
| 26 | 6.56 | 6.61 | 6.63 | 6.62 | 6.60 | 6.59 | 6.59 | 6.57 | 6.55 | 6.56 | 6.58 | 6.56 | 6.51 | 6.46 | 6.45 | 6.49 | 6.55 |
| 28 | 6.61 | 6.66 | 6.70 | 6.70 | 6.70 | 6.72 | 6.73 | 6.73 | 6.72 | 6.73 | 6.73 | 6.69 | 6.61 | 6.52 | 6.50 | 6.54 | 6.60 |
| 30 | 6.67 | 6.73 | 6.78 | 6.80 | 6.82 | 6.85 | 6.88 | 6.88 | 6.88 | 6.89 | 6.88 | 6.83 | 6.72 | 6.62 | 6.57 | 6.59 | 6.63 |
| 32 | 6.75 | 6.82 | 6.88 | 6.93 | 6.96 | 6.99 | 7.02 | 7.04 | 7.05 | 7.05 | 7.03 | 6.97 | 6.87 | 6.75 | 6.68 | 6.66 | 6.68 |
| 34 | 6.85 | 6.92 | 7.00 | 7.07 | 7.11 | 7.14 | 7.18 | 7.21 | 7.22 | 7.22 | 7.19 | 7.13 | 7.03 | 6.91 | 6.81 | 6.76 | 6.73 |
| 36 | 6.97 | 7.05 | 7.15 | 7.22 | 7.27 | 7.30 | 7.34 | 7.38 | 7.41 | 7.40 | 7.36 | 7.29 | 7.21 | 7.09 | 6.97 | 6.88 | 6.82 |
| 38 | 7.11 | 7.19 | 7.30 | 7.39 | 7.43 | 7.46 | 7.50 | 7.56 | 7.60 | 7.58 | 7.53 | 7.46 | 7.39 | 7.29 | 7.15 | 7.02 | 6.93 |
| 40 | 7.26 | 7.34 | 7.46 | 7.55 | 7.60 | 7.61 | 7.66 | 7.74 | 7.79 | 7.76 | 7.69 | 7.63 | 7.57 | 7.48 | 7.33 | 7.18 | 7.07 |
| 42 | 7.40 | 7.49 | 7.61 | 7.71 | 7.75 | 7.76 | 7.81 | 7.90 | 7.95 | 7.93 | 7.85 | 7.78 | 7.73 | 7.64 | 7.50 | 7.34 | 7.23 |
| 44 | 7.54 | 7.62 | 7.74 | 7.84 | 7.87 | 7.87 | 7.92 | 8.02 | 8.09 | 8.06 | 7.97 | 7.90 | 7.85 | 7.78 | 7.65 | 7.50 | 7.40 |
| 46 | 7.65 | 7.73 | 7.83 | 7.92 | 7.95 | 7.95 | 8.00 | 8.10 | 8.17 | 8.14 | 8.05 | 7.97 | 7.93 | 7.86 | 7.75 | 7.63 | 7.55 |
| 48 | 7.74 | 7.79 | 7.88 | 7.96 | 7.99 | 7.99 | 8.03 | 8.13 | 8.20 | 8.17 | 8.08 | 8.00 | 7.95 | 7.88 | 7.79 | 7.71 | 7.66 |
| 50 | 7.78 | 7.81 | 7.88 | 7.95 | 7.97 | 7.97 | 8.01 | 8.10 | 8.16 | 8.14 | 8.05 | 7.97 | 7.91 | 7.85 | 7.79 | 7.74 | 7.73 |
| 52 | 7.79 | 7.79 | 7.82 | 7.87 | 7.90 | 7.91 | 7.95 | 8.02 | 8.07 | 8.05 | 7.97 | 7.89 | 7.82 | 7.77 | 7.73 | 7.72 | 7.75 |
| 54 | 7.76 | 7.73 | 7.72 | 7.75 | 7.78 | 7.81 | 7.85 | 7.90 | 7.93 | 7.91 | 7.84 | 7.77 | 7.70 | 7.64 | 7.62 | 7.65 | 7.70 |
| 56 | 7.69 | 7.63 | 7.59 | 7.59 | 7.63 | 7.67 | 7.71 | 7.75 | 7.76 | 7.74 | 7.69 | 7.62 | 7.55 | 7.50 | 7.49 | 7.53 | 7.60 |
| 58 | 7.60 | 7.51 | 7.43 | 7.41 | 7.45 | 7.52 | 7.57 | 7.58 | 7.57 | 7.55 | 7.52 | 7.46 | 7.39 | 7.34 | 7.34 | 7.39 | 7.46 |
| 60 | 7.48 | 7.37 | 7.27 | 7.22 | 7.27 | 7.35 | 7.41 | 7.41 | 7.38 | 7.36 | 7.35 | 7.30 | 7.24 | 7.20 | 7.20 | 7.25 | 7.30 |
| 62 | 7.34 | 7.23 | 7.10 | 7.03 | 7.08 | 7.18 | 7.26 | 7.24 | 7.20 | 7.18 | 7.18 | 7.15 | 7.10 | 7.06 | 7.07 | 7.10 | 7.13 |
| 64 | 7.18 | 7.08 | 6.94 | 6.85 | 6.90 | 7.02 | 7.10 | 7.08 | 7.02 | 7.00 | 7.02 | 7.02 | 6.97 | 6.94 | 6.95 | 6.97 | 6.97 |
| 66 | 7.02 | 6.93 | 6.78 | 6.69 | 6.72 | 6.85 | 6.94 | 6.91 | 6.85 | 6.84 | 6.88 | 6.89 | 6.86 | 6.84 | 6.86 | 6.86 | 6.82 |
| 68 | 6.85 | 6.78 | 6.64 | 6.54 | 6.57 | 6.69 | 6.78 | 6.74 | 6.68 | 6.68 | 6.74 | 6.77 | 6.76 | 6.76 | 6.78 | 6.76 | 6.70 |
| 70 | 6.67 | 6.62 | 6.50 | 6.40 | 6.42 | 6.53 | 6.60 | 6.56 | 6.51 | 6.52 | 6.60 | 6.65 | 6.66 | 6.68 | 6.70 | 6.68 | 6.60 |
| 72 | 6.49 | 6.46 | 6.37 | 6.28 | 6.28 | 6.36 | 6.41 | 6.37 | 6.33 | 6.36 | 6.45 | 6.51 | 6.55 | 6.59 | 6.63 | 6.60 | 6.51 |
| 74 | 6.31 | 6.29 | 6.23 | 6.16 | 6.16 | 6.20 | 6.22 | 6.17 | 6.15 | 6.20 | 6.30 | 6.37 | 6.42 | 6.49 | 6.55 | 6.52 | 6.42 |
| 76 | 6.15 | 6.14 | 6.10 | 6.05 | 6.04 | 6.05 | 6.04 | 6.00 | 6.00 | 6.06 | 6.15 | 6.22 | 6.29 | 6.38 | 6.45 | 6.43 | 6.34 |
| 78 | 6.02 | 6.01 | 5.99 | 5.96 | 5.95 | 5.94 | 5.91 | 5.89 | 5.91 | 5.97 | 6.04 | 6.09 | 6.16 | 6.26 | 6.35 | 6.35 | 6.26 |
| 80 | 5.98 | 5.96 | 5.93 | 5.91 | 5.90 | 5.91 | 5.92 | 5.93 | 5.97 | 6.02 | 6.03 | 6.03 | 6.07 | 6.17 | 6.28 | 6.29 | 6.21 |
| **APRIL** | | | | | | | | | | | | | | | | | |
| 18 | 6.26 | 6.39 | 6.47 | 6.43 | 6.32 | 6.20 | 6.09 | 6.00 | 5.96 | 5.99 | 6.07 | 6.19 | 6.32 | 6.43 | 6.53 | 6.60 | 6.63 |
| 20 | 6.13 | 6.30 | 6.42 | 6.43 | 6.35 | 6.25 | 6.17 | 6.11 | 6.08 | 6.11 | 6.18 | 6.27 | 6.35 | 6.43 | 6.49 | 6.55 | 6.58 |
| 22 | 6.06 | 6.24 | 6.39 | 6.43 | 6.41 | 6.36 | 6.31 | 6.26 | 6.24 | 6.27 | 6.33 | 6.38 | 6.41 | 6.44 | 6.49 | 6.54 | 6.58 |
| 24 | 6.04 | 6.20 | 6.36 | 6.44 | 6.47 | 6.48 | 6.47 | 6.43 | 6.41 | 6.44 | 6.48 | 6.50 | 6.48 | 6.47 | 6.50 | 6.55 | 6.59 |
| 26 | 6.06 | 6.19 | 6.34 | 6.45 | 6.54 | 6.60 | 6.62 | 6.60 | 6.59 | 6.61 | 6.63 | 6.62 | 6.57 | 6.54 | 6.54 | 6.57 | 6.59 |
| 28 | 6.10 | 6.21 | 6.35 | 6.48 | 6.61 | 6.71 | 6.76 | 6.76 | 6.76 | 6.77 | 6.77 | 6.74 | 6.68 | 6.63 | 6.61 | 6.61 | 6.61 |
| 30 | 6.18 | 6.26 | 6.38 | 6.54 | 6.69 | 6.81 | 6.88 | 6.92 | 6.93 | 6.92 | 6.91 | 6.87 | 6.82 | 6.76 | 6.71 | 6.67 | 6.64 |
| 32 | 6.29 | 6.34 | 6.46 | 6.62 | 6.79 | 6.92 | 7.01 | 7.07 | 7.10 | 7.08 | 7.05 | 7.02 | 6.98 | 6.92 | 6.84 | 6.76 | 6.70 |
| 34 | 6.42 | 6.46 | 6.56 | 6.73 | 6.90 | 7.04 | 7.15 | 7.23 | 7.27 | 7.25 | 7.20 | 7.17 | 7.16 | 7.11 | 7.00 | 6.88 | 6.79 |
| 36 | 6.57 | 6.60 | 6.70 | 6.87 | 7.05 | 7.18 | 7.29 | 7.40 | 7.45 | 7.42 | 7.36 | 7.34 | 7.35 | 7.31 | 7.19 | 7.04 | 6.93 |
| 38 | 6.75 | 6.77 | 6.87 | 7.04 | 7.20 | 7.33 | 7.45 | 7.56 | 7.62 | 7.59 | 7.53 | 7.51 | 7.54 | 7.51 | 7.38 | 7.22 | 7.09 |
| 40 | 6.93 | 6.94 | 7.04 | 7.21 | 7.37 | 7.49 | 7.60 | 7.72 | 7.79 | 7.76 | 7.69 | 7.68 | 7.72 | 7.72 | 7.58 | 7.41 | 7.29 |
| 42 | 7.12 | 7.13 | 7.22 | 7.38 | 7.53 | 7.64 | 7.75 | 7.87 | 7.94 | 7.90 | 7.84 | 7.83 | 7.88 | 7.87 | 7.76 | 7.60 | 7.48 |
| 44 | 7.29 | 7.30 | 7.38 | 7.53 | 7.67 | 7.78 | 7.88 | 7.99 | 8.05 | 8.02 | 7.95 | 7.95 | 8.00 | 8.00 | 7.91 | 7.77 | 7.67 |
| 46 | 7.45 | 7.44 | 7.51 | 7.65 | 7.78 | 7.88 | 7.97 | 8.07 | 8.12 | 8.09 | 8.03 | 8.02 | 8.07 | 8.08 | 8.01 | 7.90 | 7.82 |
| 48 | 7.59 | 7.55 | 7.60 | 7.72 | 7.84 | 7.94 | 8.02 | 8.09 | 8.13 | 8.10 | 8.05 | 8.05 | 8.09 | 8.10 | 8.05 | 7.97 | 7.91 |
| 50 | 7.68 | 7.62 | 7.63 | 7.73 | 7.85 | 7.94 | 8.01 | 8.07 | 8.10 | 8.07 | 8.02 | 8.02 | 8.05 | 8.07 | 8.04 | 7.98 | 7.94 |
| 52 | 7.73 | 7.64 | 7.62 | 7.69 | 7.80 | 7.89 | 7.95 | 7.99 | 8.00 | 7.98 | 7.94 | 7.94 | 7.97 | 7.99 | 7.97 | 7.93 | 7.91 |
| 54 | 7.74 | 7.62 | 7.56 | 7.60 | 7.70 | 7.79 | 7.84 | 7.87 | 7.87 | 7.84 | 7.82 | 7.83 | 7.85 | 7.87 | 7.85 | 7.83 | 7.82 |
| 56 | 7.71 | 7.56 | 7.47 | 7.48 | 7.57 | 7.66 | 7.70 | 7.71 | 7.70 | 7.68 | 7.67 | 7.68 | 7.71 | 7.72 | 7.71 | 7.69 | 7.68 |
| 58 | 7.64 | 7.48 | 7.35 | 7.34 | 7.41 | 7.50 | 7.54 | 7.53 | 7.51 | 7.49 | 7.51 | 7.53 | 7.55 | 7.56 | 7.55 | 7.54 | 7.53 |
| 60 | 7.55 | 7.38 | 7.24 | 7.19 | 7.25 | 7.33 | 7.36 | 7.34 | 7.30 | 7.30 | 7.34 | 7.38 | 7.39 | 7.39 | 7.39 | 7.38 | 7.37 |
| 62 | 7.44 | 7.28 | 7.12 | 7.05 | 7.08 | 7.16 | 7.19 | 7.15 | 7.10 | 7.12 | 7.18 | 7.23 | 7.23 | 7.23 | 7.23 | 7.23 | 7.22 |
| 64 | 7.32 | 7.18 | 7.01 | 6.91 | 6.92 | 7.00 | 7.02 | 6.96 | 6.90 | 6.94 | 7.03 | 7.08 | 7.08 | 7.07 | 7.09 | 7.10 | 7.08 |
| 66 | 7.19 | 7.08 | 6.92 | 6.79 | 6.78 | 6.84 | 6.85 | 6.77 | 6.71 | 6.76 | 6.88 | 6.94 | 6.93 | 6.92 | 6.96 | 6.98 | 6.96 |
| 68 | 7.07 | 6.99 | 6.83 | 6.68 | 6.65 | 6.69 | 6.69 | 6.60 | 6.54 | 6.60 | 6.73 | 6.80 | 6.79 | 6.78 | 6.83 | 6.86 | 6.84 |
| 70 | 6.96 | 6.90 | 6.74 | 6.58 | 6.52 | 6.54 | 6.52 | 5.43 | 5.43 | 6.43 | 6.57 | 6.64 | 6.64 | 6.64 | 6.70 | 6.74 | 6.72 |
| 72 | 6.86 | 6.81 | 6.65 | 6.48 | 6.40 | 6.39 | 6.35 | 6.26 | 6.21 | 6.28 | 6.40 | 6.47 | 6.48 | 6.50 | 6.56 | 6.60 | 6.58 |
| 74 | 6.77 | 6.72 | 6.56 | 6.38 | 6.27 | 6.23 | 6.19 | 6.11 | 6.08 | 6.13 | 6.23 | 6.30 | 6.32 | 6.35 | 6.41 | 6.43 | 6.40 |
| 76 | 6.71 | 6.64 | 6.48 | 6.30 | 6.16 | 6.09 | 6.04 | 6.00 | 6.00 | 5.98 | 6.01 | 6.07 | 6.12 | 6.15 | 6.19 | 6.23 | 6.20 |
| 78 | 6.69 | 6.59 | 6.42 | 6.24 | 6.08 | 5.99 | 5.95 | 5.94 | 5.95 | 5.96 | 5.97 | 5.98 | 6.00 | 6.03 | 6.05 | 6. | 6.00 |
| 80 | 6.72 | 6.62 | 6.45 | 6.24 | 6.08 | 5.99 | 5.99 | 6.02 | 6.05 | 6.05 | 6.00 | 5.93 | 5.88 | 5.88 | 5.89 | 5.88 | 5.84 |

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ZONAL MEAN PRESSURE SCALE HT (KM)

KM LAT = -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 DEG

MAY

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 18 | 5.87 | 6.08 | 6.30 | 6.40 | 6.35 | 6.22 | 6.09 | 6.01 | 5.99 | 6.00 | 6.06 | 6.17 | 6.32 | 6.45 | 6.56 | 6.63 | 6.68 |
| 20 | 5.63 | 5.91 | 6.21 | 6.38 | 6.38 | 6.28 | 6.18 | 6.13 | 6.12 | 6.14 | 6.20 | 6.29 | 6.39 | 6.48 | 6.54 | 6.60 | 6.64 |
| 22 | 5.56 | 5.82 | 6.13 | 6.35 | 6.42 | 6.38 | 6.32 | 6.28 | 6.28 | 6.31 | 6.36 | 6.42 | 6.47 | 6.52 | 6.55 | 6.60 | 6.64 |
| 24 | 5.60 | 5.80 | 6.07 | 6.31 | 6.45 | 6.49 | 6.46 | 6.44 | 6.45 | 6.48 | 6.51 | 6.54 | 6.56 | 6.58 | 6.60 | 6.63 | 6.68 |
| 26 | 5.70 | 5.83 | 6.04 | 6.28 | 6.48 | 6.58 | 6.61 | 6.61 | 6.62 | 6.64 | 6.65 | 6.66 | 6.66 | 6.66 | 6.67 | 6.70 | 6.74 |
| 28 | 5.84 | 5.90 | 6.05 | 6.27 | 6.51 | 6.67 | 6.75 | 6.77 | 6.78 | 6.79 | 6.79 | 6.78 | 6.77 | 6.77 | 6.77 | 6.79 | 6.82 |
| 30 | 6.01 | 6.01 | 6.09 | 6.30 | 6.55 | 6.76 | 6.88 | 6.93 | 6.94 | 6.94 | 6.92 | 6.91 | 6.90 | 6.90 | 6.90 | 6.91 | 6.92 |
| 32 | 6.19 | 6.14 | 6.18 | 6.36 | 6.61 | 6.85 | 7.01 | 7.08 | 7.10 | 7.08 | 7.06 | 7.04 | 7.05 | 7.06 | 7.06 | 7.05 | 7.05 |
| 34 | 6.39 | 6.30 | 6.30 | 6.45 | 6.71 | 6.96 | 7.14 | 7.23 | 7.25 | 7.23 | 7.20 | 7.19 | 7.22 | 7.24 | 7.23 | 7.22 | 7.20 |
| 36 | 6.60 | 6.49 | 6.46 | 6.59 | 6.83 | 7.09 | 7.28 | 7.38 | 7.40 | 7.39 | 7.35 | 7.36 | 7.39 | 7.43 | 7.43 | 7.40 | 7.37 |
| 38 | 6.80 | 6.68 | 6.64 | 6.75 | 6.97 | 7.23 | 7.43 | 7.53 | 7.55 | 7.55 | 7.51 | 7.53 | 7.58 | 7.62 | 7.62 | 7.59 | 7.55 |
| 40 | 7.00 | 6.89 | 6.84 | 6.92 | 7.13 | 7.38 | 7.57 | 7.67 | 7.69 | 7.67 | 7.66 | 7.70 | 7.76 | 7.80 | 7.81 | 7.78 | 7.73 |
| 42 | 7.19 | 7.09 | 7.04 | 7.11 | 7.29 | 7.52 | 7.71 | 7.79 | 7.81 | 7.80 | 7.80 | 7.85 | 7.91 | 7.97 | 7.98 | 7.95 | 7.91 |
| 44 | 7.37 | 7.27 | 7.22 | 7.28 | 7.44 | 7.65 | 7.82 | 7.90 | 7.91 | 7.90 | 7.92 | 7.97 | 8.04 | 8.09 | 8.11 | 8.10 | 8.07 |
| 46 | 7.52 | 7.44 | 7.39 | 7.43 | 7.56 | 7.75 | 7.91 | 7.97 | 7.97 | 7.97 | 7.99 | 8.05 | 8.12 | 8.18 | 8.21 | 8.21 | 8.19 |
| 48 | 7.64 | 7.57 | 7.52 | 7.53 | 7.64 | 7.81 | 7.96 | 8.01 | 8.00 | 7.99 | 8.02 | 8.08 | 8.15 | 8.20 | 8.25 | 8.27 | 8.27 |
| 50 | 7.72 | 7.67 | 7.61 | 7.59 | 7.67 | 7.82 | 7.96 | 8.01 | 7.99 | 7.98 | 8.00 | 8.06 | 8.12 | 8.18 | 8.23 | 8.28 | 8.30 |
| 52 | 7.76 | 7.72 | 7.65 | 7.60 | 7.65 | 7.78 | 7.91 | 7.96 | 7.93 | 7.91 | 7.94 | 7.99 | 8.05 | 8.10 | 8.17 | 8.23 | 8.28 |
| 54 | 7.76 | 7.73 | 7.65 | 7.57 | 7.58 | 7.69 | 7.81 | 7.86 | 7.83 | 7.80 | 7.83 | 7.88 | 7.93 | 7.98 | 8.06 | 8.14 | 8.20 |
| 56 | 7.72 | 7.70 | 7.61 | 7.51 | 7.48 | 7.57 | 7.68 | 7.71 | 7.68 | 7.66 | 7.69 | 7.73 | 7.77 | 7.83 | 7.91 | 8.01 | 8.08 |
| 58 | 7.64 | 7.64 | 7.55 | 7.42 | 7.37 | 7.43 | 7.51 | 7.54 | 7.51 | 7.50 | 7.53 | 7.57 | 7.60 | 7.65 | 7.74 | 7.85 | 7.92 |
| 60 | 7.54 | 7.55 | 7.47 | 7.33 | 7.25 | 7.27 | 7.33 | 7.33 | 7.30 | 7.31 | 7.36 | 7.40 | 7.42 | 7.46 | 7.56 | 7.67 | 7.75 |
| 62 | 7.42 | 7.45 | 7.38 | 7.23 | 7.13 | 7.11 | 7.13 | 7.11 | 7.09 | 7.12 | 7.18 | 7.22 | 7.23 | 7.27 | 7.37 | 7.48 | 7.55 |
| 64 | 7.30 | 7.34 | 7.28 | 7.13 | 7.01 | 6.96 | 6.93 | 6.88 | 6.86 | 6.92 | 7.01 | 7.05 | 7.04 | 7.07 | 7.17 | 7.28 | 7.35 |
| 66 | 7.18 | 7.23 | 7.18 | 7.04 | 6.90 | 6.81 | 6.73 | 6.65 | 6.64 | 6.73 | 6.83 | 6.87 | 6.85 | 6.88 | 6.98 | 7.09 | 7.14 |
| 68 | 7.07 | 7.12 | 7.08 | 6.94 | 6.79 | 6.66 | 6.53 | 6.43 | 6.43 | 6.54 | 6.66 | 6.69 | 6.66 | 6.68 | 6.78 | 6.88 | 6.92 |
| 70 | 6.98 | 7.02 | 6.97 | 6.83 | 6.67 | 6.51 | 6.35 | 6.24 | 6.24 | 6.36 | 6.47 | 6.50 | 6.46 | 6.48 | 6.58 | 6.67 | 6.69 |
| 72 | 6.92 | 6.93 | 6.86 | 6.71 | 6.54 | 6.35 | 6.18 | 6.06 | 6.07 | 6.18 | 6.29 | 6.30 | 6.26 | 6.28 | 6.37 | 6.44 | 6.44 |
| 74 | 6.88 | 6.85 | 6.75 | 6.58 | 6.39 | 6.20 | 6.03 | 5.93 | 5.94 | 6.04 | 6.11 | 6.09 | 6.06 | 6.08 | 6.15 | 6.19 | 6.18 |
| 76 | 6.87 | 6.79 | 6.65 | 6.46 | 6.25 | 6.06 | 5.91 | 5.85 | 5.87 | 5.93 | 5.95 | 5.91 | 5.86 | 5.87 | 5.90 | 5.92 | 5.89 |
| 78 | 6.87 | 6.75 | 6.58 | 6.37 | 6.16 | 5.97 | 5.86 | 5.83 | 5.86 | 5.89 | 5.85 | 5.76 | 5.69 | 5.66 | 5.65 | 5.62 | 5.58 |
| 80 | 6.87 | 6.75 | 6.59 | 6.40 | 6.19 | 6.00 | 5.91 | 5.92 | 5.97 | 5.97 | 5.87 | 5.71 | 5.57 | 5.47 | 5.38 | 5.31 | 5.26 |

JUNE

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 18 | 5.56 | 5.80 | 6.10 | 6.34 | 6.39 | 6.28 | 6.14 | 6.05 | 6.03 | 6.03 | 6.07 | 6.16 | 6.31 | 6.48 | 6.62 | 6.72 | 6.77 |
| 20 | 5.24 | 5.55 | 5.96 | 6.30 | 6.42 | 6.34 | 6.23 | 6.17 | 6.17 | 6.20 | 6.25 | 6.32 | 6.43 | 6.54 | 6.64 | 6.71 | 6.77 |
| 22 | 5.17 | 5.46 | 5.86 | 6.24 | 6.44 | 6.43 | 6.35 | 6.31 | 6.33 | 6.37 | 6.41 | 6.46 | 6.53 | 6.60 | 6.67 | 6.74 | 6.80 |
| 24 | 5.25 | 5.47 | 5.82 | 6.19 | 6.45 | 6.52 | 6.48 | 6.46 | 6.48 | 6.52 | 6.55 | 6.58 | 6.63 | 6.68 | 6.73 | 6.79 | 6.84 |
| 26 | 5.43 | 5.56 | 5.82 | 6.15 | 6.43 | 6.58 | 6.61 | 6.61 | 6.63 | 6.66 | 6.68 | 6.70 | 6.73 | 6.77 | 6.81 | 6.87 | 6.91 |
| 28 | 5.65 | 5.71 | 5.87 | 6.13 | 6.42 | 6.63 | 6.73 | 6.76 | 6.77 | 6.78 | 6.80 | 6.81 | 6.83 | 6.87 | 6.92 | 6.97 | 7.01 |
| 30 | 5.91 | 5.90 | 5.97 | 6.16 | 6.43 | 6.69 | 6.85 | 6.90 | 6.90 | 6.90 | 6.91 | 6.93 | 6.95 | 7.00 | 7.06 | 7.11 | 7.12 |
| 32 | 6.18 | 6.12 | 6.12 | 6.22 | 6.46 | 6.76 | 6.97 | 7.04 | 7.02 | 7.03 | 7.05 | 7.08 | 7.14 | 7.22 | 7.26 | 7.26 | |
| 34 | 6.45 | 6.36 | 6.29 | 6.33 | 6.54 | 6.84 | 7.10 | 7.19 | 7.17 | 7.15 | 7.16 | 7.19 | 7.23 | 7.30 | 7.39 | 7.43 | 7.41 |
| 36 | 6.71 | 6.60 | 6.49 | 6.48 | 6.65 | 6.96 | 7.23 | 7.33 | 7.30 | 7.28 | 7.30 | 7.34 | 7.39 | 7.47 | 7.53 | 7.61 | 7.58 |
| 38 | 6.95 | 6.84 | 6.70 | 6.80 | | 7.10 | 7.38 | 7.47 | 7.44 | 7.41 | 7.44 | 7.49 | 7.55 | 7.65 | 7.75 | 7.79 | 7.76 |
| 40 | 7.17 | 7.07 | 6.93 | 6.86 | 6.98 | 7.26 | 7.52 | 7.61 | 7.57 | 7.55 | 7.59 | 7.65 | 7.71 | 7.81 | 7.92 | 7.97 | 7.94 |
| 42 | 7.36 | 7.27 | 7.14 | 7.07 | 7.17 | 7.42 | 7.65 | 7.73 | 7.69 | 7.67 | 7.72 | 7.79 | 7.86 | 7.96 | 8.07 | 8.13 | 8.10 |
| 44 | 7.53 | 7.46 | 7.34 | 7.27 | 7.35 | 7.57 | 7.77 | 7.82 | 7.78 | 7.78 | 7.84 | 7.91 | 7.98 | 8.08 | 8.19 | 8.26 | 8.25 |
| 46 | 7.67 | 7.61 | 7.51 | 7.44 | 7.51 | 7.70 | 7.86 | 7.90 | 7.87 | 7.87 | 7.92 | 7.99 | 8.06 | 8.14 | 8.28 | 8.35 | 8.36 |
| 48 | 7.78 | 7.74 | 7.64 | 7.57 | 7.62 | 7.78 | 7.92 | 7.95 | 7.91 | 7.91 | 7.97 | 8.04 | 8.11 | 8.20 | 8.32 | 8.41 | 8.44 |
| 50 | 7.86 | 7.83 | 7.74 | 7.65 | 7.68 | 7.80 | 7.92 | 7.92 | 7.92 | 7.92 | 7.97 | 8.04 | 8.10 | 8.18 | 8.32 | 8.42 | 8.47 |
| 52 | 7.91 | 7.88 | 7.79 | 7.68 | 7.68 | 7.78 | 7.88 | 7.91 | 7.88 | 7.87 | 7.92 | 7.98 | 8.04 | 8.14 | 8.27 | 8.39 | 8.45 |
| 54 | 7.91 | 7.90 | 7.80 | 7.67 | 7.62 | 7.70 | 7.79 | 7.82 | 7.79 | 7.79 | 7.83 | 7.88 | 7.94 | 8.04 | 8.18 | 8.31 | 8.39 |
| 56 | 7.87 | 7.87 | 7.77 | 7.62 | 7.54 | 7.58 | 7.66 | 7.68 | 7.66 | 7.65 | 7.69 | 7.74 | 7.80 | 7.90 | 8.05 | 8.20 | 8.28 |
| 58 | 7.79 | 7.81 | 7.71 | 7.54 | 7.43 | 7.44 | 7.49 | 7.51 | 7.49 | 7.49 | 7.52 | 7.56 | 7.62 | 7.73 | 7.89 | 8.04 | 8.13 |
| 60 | 7.68 | 7.71 | 7.62 | 7.45 | 7.31 | 7.28 | 7.31 | 7.31 | 7.30 | 7.30 | 7.33 | 7.37 | 7.43 | 7.54 | 7.70 | 7.86 | 7.95 |
| 62 | 7.54 | 7.58 | 7.52 | 7.35 | 7.19 | 7.12 | 7.10 | 7.09 | 7.08 | 7.09 | 7.12 | 7.16 | 7.21 | 7.33 | 7.49 | 7.65 | 7.74 |
| 64 | 7.39 | 7.43 | 7.39 | 7.25 | 7.08 | 6.96 | 6.89 | 6.86 | 6.86 | 6.88 | 6.91 | 6.94 | 6.99 | 7.10 | 7.26 | 7.42 | 7.51 |
| 66 | 7.23 | 7.27 | 7.25 | 7.14 | 6.97 | 6.81 | 6.68 | 6.62 | 6.63 | 6.67 | 6.70 | 6.72 | 6.76 | 6.86 | 7.02 | 7.16 | 7.25 |
| 68 | 7.08 | 7.11 | 7.11 | 7.02 | 6.85 | 6.65 | 6.48 | 6.40 | 6.41 | 6.47 | 6.51 | 6.51 | 6.53 | 6.62 | 6.76 | 6.89 | 6.97 |
| 70 | 6.95 | 6.97 | 6.96 | 6.88 | 6.71 | 6.48 | 6.29 | 6.19 | 6.21 | 6.28 | 6.32 | 6.30 | 6.30 | 6.36 | 6.49 | 6.61 | 6.67 |
| 72 | 6.85 | 6.84 | 6.81 | 6.73 | 6.55 | 6.31 | 6.10 | 6.01 | 6.04 | 6.11 | 6.15 | 6.11 | 6.08 | 6.11 | 6.21 | 6.30 | 6.36 |
| 74 | 6.77 | 6.74 | 6.67 | 6.55 | 6.36 | 6.14 | 5.95 | 5.86 | 5.90 | 5.97 | 5.99 | 5.93 | 5.86 | 5.85 | 5.91 | 5.99 | 6.03 |
| 76 | 6.73 | 6.67 | 6.55 | 6.39 | 6.19 | 5.98 | 5.82 | 5.76 | 5.80 | 5.87 | 5.87 | 5.77 | 5.66 | 5.60 | 5.62 | 5.66 | 5.68 |
| 78 | 6.70 | 6.61 | 6.47 | 6.27 | 6.07 | 5.88 | 5.76 | 5.73 | 5.78 | 5.82 | 5.79 | 5.65 | 5.48 | 5.37 | 5.32 | 5.32 | 5.33 |
| 80 | 6.65 | 6.55 | 6.43 | 6.30 | 6.12 | 5.93 | 5.81 | 5.79 | 5.85 | 5.86 | 5.77 | 5.58 | 5.35 | 5.16 | 5.03 | 4.98 | 4.98 |

ZONAL MEAN PRESSURE SCALE HT (KM)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

JULY

| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.25 | 5.53 | 5.93 | 6.27 | 6.39 | 6.29 | 6.14 | 6.06 | 6.05 | 6.06 | 6.09 | 6.17 | 6.31 | 6.48 | 6.63 | 6.73 | 6.79 |
| 20 | 4.92 | 5.26 | 5.76 | 6.22 | 6.41 | 6.34 | 6.21 | 6.15 | 6.18 | 6.22 | 6.26 | 6.32 | 6.42 | 6.54 | 6.64 | 6.72 | 6.78 |
| 22 | 4.96 | 5.25 | 5.71 | 6.18 | 6.45 | 6.45 | 6.34 | 6.29 | 6.32 | 6.38 | 6.41 | 6.46 | 6.53 | 6.61 | 6.68 | 6.75 | 6.82 |
| 24 | 5.20 | 5.39 | 5.73 | 6.16 | 6.48 | 6.55 | 6.48 | 6.44 | 6.47 | 6.51 | 6.54 | 6.57 | 6.63 | 6.69 | 6.74 | 6.81 | 6.87 |
| 26 | 5.53 | 5.61 | 5.83 | 6.17 | 6.49 | 6.63 | 6.62 | 6.59 | 6.60 | 6.63 | 6.65 | 6.67 | 6.72 | 6.78 | 6.83 | 6.89 | 6.94 |
| 28 | 5.89 | 5.88 | 5.98 | 6.22 | 6.50 | 6.68 | 6.73 | 6.73 | 6.72 | 6.74 | 6.75 | 6.77 | 6.82 | 6.88 | 6.94 | 6.99 | 7.03 |
| 30 | 6.23 | 6.15 | 6.17 | 6.30 | 6.52 | 6.73 | 6.84 | 6.85 | 6.84 | 6.84 | 6.85 | 6.88 | 6.92 | 6.99 | 7.07 | 7.12 | 7.13 |
| 32 | 6.54 | 6.45 | 6.38 | 6.42 | 6.58 | 6.79 | 6.94 | 6.98 | 6.96 | 6.95 | 6.96 | 6.99 | 7.04 | 7.13 | 7.22 | 7.26 | 7.25 |
| 34 | 6.79 | 6.71 | 6.61 | 6.57 | 6.67 | 6.87 | 7.05 | 7.11 | 7.08 | 7.06 | 7.08 | 7.11 | 7.17 | 7.27 | 7.37 | 7.42 | 7.39 |
| 36 | 7.00 | 6.96 | 6.84 | 6.75 | 6.79 | 6.98 | 7.17 | 7.24 | 7.21 | 7.19 | 7.21 | 7.25 | 7.32 | 7.42 | 7.54 | 7.58 | 7.55 |
| 38 | 7.18 | 7.17 | 7.07 | 6.95 | 6.96 | 7.12 | 7.31 | 7.38 | 7.35 | 7.32 | 7.35 | 7.39 | 7.46 | 7.58 | 7.70 | 7.75 | 7.71 |
| 40 | 7.34 | 7.36 | 7.22 | 7.15 | 7.14 | 7.29 | 7.46 | 7.53 | 7.49 | 7.47 | 7.49 | 7.54 | 7.61 | 7.73 | 7.86 | 7.91 | 7.88 |
| 42 | 7.49 | 7.52 | 7.45 | 7.34 | 7.33 | 7.46 | 7.61 | 7.67 | 7.63 | 7.60 | 7.63 | 7.68 | 7.75 | 7.87 | 8.00 | 8.06 | 8.04 |
| 44 | 7.64 | 7.66 | 7.60 | 7.51 | 7.51 | 7.62 | 7.75 | 7.79 | 7.75 | 7.73 | 7.75 | 7.80 | 7.87 | 7.98 | 8.11 | 8.18 | 8.18 |
| 46 | 7.79 | 7.79 | 7.72 | 7.64 | 7.65 | 7.75 | 7.86 | 7.89 | 7.85 | 7.82 | 7.84 | 7.89 | 7.96 | 8.07 | 8.19 | 8.28 | 8.30 |
| 48 | 7.92 | 7.88 | 7.80 | 7.72 | 7.73 | 7.83 | 7.93 | 7.94 | 7.91 | 7.88 | 7.90 | 7.94 | 8.01 | 8.11 | 8.24 | 8.34 | 8.38 |
| 50 | 8.03 | 7.96 | 7.84 | 7.75 | 7.75 | 7.85 | 7.94 | 7.96 | 7.92 | 7.90 | 7.92 | 7.95 | 8.01 | 8.11 | 8.24 | 8.36 | 8.42 |
| 52 | 8.09 | 8.00 | 7.85 | 7.72 | 7.71 | 7.80 | 7.89 | 7.92 | 7.89 | 7.87 | 7.88 | 7.91 | 7.96 | 8.06 | 8.20 | 8.34 | 8.42 |
| 54 | 8.10 | 8.00 | 7.82 | 7.66 | 7.61 | 7.69 | 7.79 | 7.83 | 7.81 | 7.79 | 7.80 | 7.81 | 7.86 | 7.96 | 8.12 | 8.28 | 8.37 |
| 56 | 8.05 | 7.95 | 7.76 | 7.56 | 7.48 | 7.54 | 7.64 | 7.70 | 7.69 | 7.67 | 7.67 | 7.67 | 7.71 | 7.83 | 8.01 | 8.18 | 8.27 |
| 58 | 7.95 | 7.86 | 7.67 | 7.44 | 7.33 | 7.36 | 7.46 | 7.53 | 7.54 | 7.52 | 7.51 | 7.50 | 7.54 | 7.66 | 7.85 | 8.04 | 8.14 |
| 60 | 7.80 | 7.73 | 7.55 | 7.32 | 7.18 | 7.18 | 7.26 | 7.33 | 7.34 | 7.32 | 7.32 | 7.30 | 7.33 | 7.46 | 7.67 | 7.86 | 7.97 |
| 62 | 7.61 | 7.57 | 7.41 | 7.19 | 7.03 | 7.00 | 7.06 | 7.13 | 7.16 | 7.15 | 7.12 | 7.09 | 7.11 | 7.25 | 7.46 | 7.66 | 7.77 |
| 64 | 7.41 | 7.38 | 7.26 | 7.07 | 6.91 | 6.84 | 6.86 | 6.91 | 6.95 | 6.95 | 6.91 | 6.87 | 6.89 | 7.02 | 7.23 | 7.43 | 7.54 |
| 66 | 7.22 | 7.19 | 7.10 | 6.95 | 6.79 | 6.70 | 6.67 | 6.70 | 6.74 | 6.75 | 6.71 | 6.66 | 6.67 | 6.78 | 6.97 | 7.16 | 7.28 |
| 68 | 7.03 | 7.01 | 6.94 | 6.83 | 6.69 | 6.56 | 6.50 | 6.50 | 6.53 | 6.55 | 6.52 | 6.46 | 6.45 | 6.54 | 6.70 | 6.88 | 7.00 |
| 70 | 6.87 | 6.85 | 6.80 | 6.71 | 6.57 | 6.43 | 6.33 | 6.30 | 6.33 | 6.36 | 6.34 | 6.28 | 6.25 | 6.30 | 6.42 | 6.57 | 6.68 |
| 72 | 6.74 | 6.71 | 6.66 | 6.58 | 6.44 | 6.29 | 6.17 | 6.12 | 6.14 | 6.18 | 6.17 | 6.11 | 6.05 | 6.05 | 6.12 | 6.24 | 6.34 |
| 74 | 6.62 | 6.61 | 6.55 | 6.44 | 6.30 | 6.14 | 6.02 | 5.96 | 5.97 | 6.02 | 6.03 | 5.97 | 5.87 | 5.81 | 5.82 | 5.90 | 5.98 |
| 76 | 6.54 | 6.53 | 6.46 | 6.32 | 6.15 | 6.00 | 5.89 | 5.83 | 5.83 | 5.89 | 5.92 | 5.85 | 5.71 | 5.57 | 5.52 | 5.56 | 5.62 |
| 78 | 6.47 | 6.47 | 6.40 | 6.23 | 6.04 | 5.90 | 5.80 | 5.75 | 5.75 | 5.81 | 5.84 | 5.75 | 5.56 | 5.35 | 5.23 | 5.22 | 5.27 |
| 80 | 6.43 | 6.40 | 6.34 | 6.23 | 6.07 | 5.91 | 5.79 | 5.75 | 5.78 | 5.82 | 5.81 | 5.68 | 5.43 | 5.14 | 4.95 | 4.90 | 4.95 |

AUGUST

| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.00 | 5.41 | 5.93 | 6.32 | 6.42 | 6.29 | 6.13 | 6.04 | 6.03 | 6.06 | 6.12 | 6.21 | 6.34 | 6.47 | 6.59 | 6.68 | 6.72 |
| 20 | 4.64 | 5.13 | 5.79 | 6.30 | 6.45 | 6.34 | 6.18 | 6.12 | 6.13 | 6.18 | 6.25 | 6.33 | 6.42 | 6.51 | 6.59 | 6.66 | 6.71 |
| 22 | 4.79 | 5.21 | 5.80 | 6.31 | 6.51 | 6.45 | 6.32 | 6.26 | 6.28 | 6.34 | 6.38 | 6.44 | 6.50 | 6.57 | 6.63 | 6.68 | 6.72 |
| 24 | 5.17 | 5.47 | 5.91 | 6.34 | 6.56 | 6.56 | 6.47 | 6.42 | 6.44 | 6.48 | 6.51 | 6.54 | 6.59 | 6.65 | 6.69 | 6.72 | 6.75 |
| 26 | 5.67 | 5.82 | 6.09 | 6.39 | 6.60 | 6.65 | 6.61 | 6.57 | 6.59 | 6.61 | 6.62 | 6.64 | 6.68 | 6.73 | 6.77 | 6.79 | 6.81 |
| 28 | 6.18 | 6.20 | 6.30 | 6.47 | 6.64 | 6.72 | 6.73 | 6.71 | 6.71 | 6.72 | 6.73 | 6.74 | 6.77 | 6.82 | 6.86 | 6.88 | 6.88 |
| 30 | 6.62 | 6.56 | 6.54 | 6.58 | 6.68 | 6.78 | 6.84 | 6.84 | 6.83 | 6.83 | 6.83 | 6.84 | 6.87 | 6.92 | 6.98 | 6.99 | 6.98 |
| 32 | 6.96 | 6.88 | 6.77 | 6.71 | 6.75 | 6.85 | 6.95 | 6.97 | 6.95 | 6.94 | 6.94 | 6.95 | 6.98 | 7.04 | 7.10 | 7.12 | 7.09 |
| 34 | 7.19 | 7.14 | 7.00 | 6.86 | 6.84 | 6.94 | 7.07 | 7.11 | 7.09 | 7.06 | 7.06 | 7.07 | 7.10 | 7.17 | 7.24 | 7.26 | 7.22 |
| 36 | 7.35 | 7.35 | 7.22 | 7.03 | 6.96 | 7.05 | 7.20 | 7.26 | 7.23 | 7.20 | 7.20 | 7.21 | 7.24 | 7.31 | 7.39 | 7.41 | 7.37 |
| 38 | 7.46 | 7.51 | 7.40 | 7.20 | 7.10 | 7.19 | 7.35 | 7.42 | 7.39 | 7.35 | 7.34 | 7.36 | 7.39 | 7.46 | 7.54 | 7.57 | 7.52 |
| 40 | 7.57 | 7.64 | 7.56 | 7.36 | 7.26 | 7.34 | 7.51 | 7.59 | 7.56 | 7.51 | 7.49 | 7.50 | 7.54 | 7.61 | 7.69 | 7.71 | 7.67 |
| 42 | 7.70 | 7.76 | 7.68 | 7.51 | 7.42 | 7.50 | 7.67 | 7.75 | 7.72 | 7.66 | 7.64 | 7.64 | 7.68 | 7.75 | 7.82 | 7.85 | 7.81 |
| 44 | 7.84 | 7.86 | 7.77 | 7.61 | 7.55 | 7.65 | 7.81 | 7.89 | 7.86 | 7.80 | 7.76 | 7.76 | 7.79 | 7.86 | 7.93 | 7.96 | 7.93 |
| 46 | 7.98 | 7.94 | 7.82 | 7.68 | 7.65 | 7.76 | 7.92 | 8.00 | 7.97 | 7.90 | 7.86 | 7.84 | 7.87 | 7.94 | 8.01 | 8.05 | 8.03 |
| 48 | 8.11 | 8.00 | 7.83 | 7.70 | 7.70 | 7.82 | 7.98 | 8.05 | 8.02 | 7.96 | 7.91 | 7.89 | 7.91 | 7.98 | 8.05 | 8.10 | 8.10 |
| 50 | 8.20 | 8.02 | 7.81 | 7.67 | 7.68 | 7.82 | 7.97 | 8.05 | 8.02 | 7.96 | 7.91 | 7.89 | 7.90 | 7.97 | 8.05 | 8.11 | 8.13 |
| 52 | 8.23 | 8.00 | 7.75 | 7.60 | 7.61 | 7.75 | 7.91 | 7.98 | 7.96 | 7.91 | 7.87 | 7.84 | 7.85 | 7.91 | 8.01 | 8.09 | 8.13 |
| 54 | 8.18 | 7.94 | 7.67 | 7.50 | 7.50 | 7.64 | 7.79 | 7.86 | 7.85 | 7.82 | 7.79 | 7.75 | 7.75 | 7.81 | 7.92 | 8.04 | 8.10 |
| 56 | 8.06 | 7.83 | 7.56 | 7.37 | 7.36 | 7.48 | 7.63 | 7.70 | 7.71 | 7.69 | 7.67 | 7.63 | 7.61 | 7.67 | 7.81 | 7.95 | 8.04 |
| 58 | 7.88 | 7.68 | 7.43 | 7.24 | 7.20 | 7.31 | 7.44 | 7.52 | 7.54 | 7.54 | 7.53 | 7.48 | 7.45 | 7.51 | 7.66 | 7.83 | 7.94 |
| 60 | 7.62 | 7.51 | 7.28 | 7.10 | 7.05 | 7.13 | 7.25 | 7.32 | 7.36 | 7.38 | 7.37 | 7.32 | 7.28 | 7.34 | 7.50 | 7.69 | 7.82 |
| 62 | 7.45 | 7.33 | 7.14 | 6.98 | 6.92 | 6.98 | 7.06 | 7.13 | 7.18 | 7.22 | 7.21 | 7.15 | 7.10 | 7.15 | 7.32 | 7.52 | 7.66 |
| 64 | 7.25 | 7.15 | 7.00 | 6.87 | 6.81 | 6.84 | 6.89 | 6.94 | 7.00 | 7.05 | 7.05 | 6.98 | 6.91 | 6.96 | 7.12 | 7.32 | 7.47 |
| 66 | 7.02 | 6.98 | 6.86 | 6.77 | 6.72 | 6.71 | 6.73 | 6.76 | 6.82 | 6.88 | 6.88 | 6.81 | 6.73 | 6.76 | 6.91 | 7.10 | 7.25 |
| 68 | 6.91 | 6.84 | 6.75 | 6.68 | 6.64 | 6.61 | 6.58 | 6.59 | 6.64 | 6.71 | 6.71 | 6.64 | 6.56 | 6.57 | 6.69 | 6.85 | 6.99 |
| 70 | 6.78 | 6.72 | 6.65 | 6.60 | 6.56 | 6.50 | 6.44 | 6.42 | 6.46 | 6.52 | 6.54 | 6.47 | 6.39 | 6.37 | 6.45 | 6.58 | 6.70 |
| 72 | 6.66 | 6.62 | 6.58 | 6.53 | 6.47 | 6.39 | 6.30 | 6.25 | 6.26 | 6.32 | 6.36 | 6.31 | 6.22 | 6.16 | 6.19 | 6.29 | 6.39 |
| 74 | 6.54 | 6.55 | 6.52 | 6.45 | 6.36 | 6.26 | 6.16 | 6.08 | 6.07 | 6.12 | 6.18 | 6.15 | 6.05 | 5.95 | 5.93 | 5.99 | 6.07 |
| 76 | 6.43 | 6.49 | 6.48 | 6.37 | 6.23 | 6.12 | 6.02 | 5.93 | 5.89 | 5.94 | 6.02 | 6.01 | 5.89 | 5.75 | 5.68 | 5.70 | 5.75 |
| 78 | 6.35 | 6.45 | 6.43 | 6.29 | 6.13 | 6.00 | 5.91 | 5.82 | 5.78 | 5.83 | 5.91 | 5.90 | 5.75 | 5.56 | 5.44 | 5.43 | 5.48 |
| 80 | 6.41 | 6.41 | 6.36 | 6.25 | 6.10 | 5.98 | 5.88 | 5.83 | 5.82 | 5.86 | 5.90 | 5.85 | 5.66 | 5.42 | 5.25 | 5.21 | 5.27 |

ZONAL MEAN PRESSURE SCALE HT (KM)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**SEPTEMBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.17 | 5.67 | 6.22 | 6.49 | 6.43 | 6.26 | 6.12 | 6.04 | 6.01 | 6.05 | 6.11 | 6.22 | 6.34 | 6.46 | 6.55 | 6.60 | 6.60 |
| 20 | 5.01 | 5.56 | 6.18 | 6.50 | 6.46 | 6.30 | 6.19 | 6.14 | 6.13 | 6.15 | 6.21 | 6.29 | 6.38 | 6.46 | 6.53 | 6.56 | 6.55 |
| 22 | 5.24 | 5.70 | 6.22 | 6.51 | 6.52 | 6.40 | 6.32 | 6.29 | 6.29 | 6.32 | 6.35 | 6.39 | 6.45 | 6.50 | 6.55 | 6.56 | 6.55 |
| 24 | 5.66 | 5.97 | 6.32 | 6.53 | 6.57 | 6.51 | 6.46 | 6.45 | 6.46 | 6.48 | 6.49 | 6.50 | 6.52 | 6.56 | 6.58 | 6.58 | 6.55 |
| 26 | 6.18 | 6.31 | 6.46 | 6.57 | 6.62 | 6.62 | 6.60 | 6.60 | 6.61 | 6.63 | 6.62 | 6.61 | 6.61 | 6.62 | 6.63 | 6.61 | 6.57 |
| 28 | 6.69 | 6.66 | 6.63 | 6.63 | 6.66 | 6.71 | 6.73 | 6.75 | 6.75 | 6.75 | 6.74 | 6.71 | 6.69 | 6.69 | 6.69 | 6.66 | 6.60 |
| 30 | 7.13 | 6.98 | 6.81 | 6.71 | 6.72 | 6.79 | 6.86 | 6.89 | 6.88 | 6.87 | 6.85 | 6.82 | 6.79 | 6.78 | 6.77 | 6.72 | 6.64 |
| 32 | 7.47 | 7.25 | 7.00 | 6.82 | 6.80 | 6.89 | 6.99 | 7.03 | 7.02 | 7.00 | 6.97 | 6.94 | 6.90 | 6.89 | 6.87 | 6.80 | 6.70 |
| 34 | 7.69 | 7.47 | 7.18 | 6.95 | 6.90 | 7.00 | 7.13 | 7.19 | 7.16 | 7.13 | 7.10 | 7.07 | 7.03 | 7.01 | 6.98 | 6.90 | 6.78 |
| 36 | 7.83 | 7.64 | 7.35 | 7.10 | 7.03 | 7.13 | 7.28 | 7.35 | 7.32 | 7.28 | 7.25 | 7.21 | 7.18 | 7.15 | 7.11 | 7.01 | 6.89 |
| 38 | 7.92 | 7.77 | 7.50 | 7.25 | 7.17 | 7.28 | 7.44 | 7.52 | 7.49 | 7.44 | 7.40 | 7.37 | 7.33 | 7.31 | 7.26 | 7.15 | 7.01 |
| 40 | 8.00 | 7.87 | 7.63 | 7.40 | 7.33 | 7.44 | 7.60 | 7.69 | 7.67 | 7.61 | 7.56 | 7.52 | 7.49 | 7.46 | 7.41 | 7.29 | 7.15 |
| 42 | 8.07 | 7.94 | 7.73 | 7.54 | 7.49 | 7.59 | 7.75 | 7.84 | 7.83 | 7.77 | 7.71 | 7.67 | 7.64 | 7.61 | 7.55 | 7.43 | 7.29 |
| 44 | 8.14 | 7.99 | 7.79 | 7.64 | 7.62 | 7.73 | 7.88 | 7.97 | 7.97 | 7.91 | 7.84 | 7.79 | 7.76 | 7.74 | 7.67 | 7.55 | 7.43 |
| 46 | 8.21 | 8.01 | 7.82 | 7.70 | 7.72 | 7.83 | 7.97 | 8.06 | 8.06 | 8.00 | 7.93 | 7.88 | 7.86 | 7.83 | 7.76 | 7.66 | 7.55 |
| 48 | 8.25 | 8.02 | 7.81 | 7.72 | 7.76 | 7.88 | 8.01 | 8.09 | 8.09 | 8.04 | 7.97 | 7.92 | 7.90 | 7.87 | 7.81 | 7.73 | 7.65 |
| 50 | 8.26 | 7.99 | 7.76 | 7.69 | 7.75 | 7.88 | 7.99 | 8.06 | 8.07 | 8.02 | 7.96 | 7.92 | 7.89 | 7.86 | 7.82 | 7.76 | 7.72 |
| 52 | 8.22 | 7.93 | 7.69 | 7.62 | 7.69 | 7.82 | 7.92 | 7.98 | 7.98 | 7.95 | 7.90 | 7.86 | 7.83 | 7.80 | 7.77 | 7.75 | 7.75 |
| 54 | 8.13 | 7.84 | 7.60 | 7.52 | 7.59 | 7.71 | 7.80 | 7.84 | 7.85 | 7.83 | 7.80 | 7.77 | 7.73 | 7.70 | 7.69 | 7.70 | 7.74 |
| 56 | 7.98 | 7.72 | 7.49 | 7.40 | 7.46 | 7.56 | 7.65 | 7.68 | 7.68 | 7.68 | 7.67 | 7.64 | 7.59 | 7.55 | 7.56 | 7.62 | 7.69 |
| 58 | 7.80 | 7.57 | 7.37 | 7.28 | 7.32 | 7.41 | 7.47 | 7.49 | 7.49 | 7.51 | 7.52 | 7.49 | 7.42 | 7.39 | 7.42 | 7.50 | 7.60 |
| 60 | 7.59 | 7.42 | 7.24 | 7.16 | 7.18 | 7.25 | 7.29 | 7.29 | 7.30 | 7.34 | 7.36 | 7.32 | 7.25 | 7.21 | 7.25 | 7.37 | 7.48 |
| 62 | 7.38 | 7.26 | 7.12 | 7.04 | 7.05 | 7.09 | 7.11 | 7.10 | 7.12 | 7.17 | 7.21 | 7.16 | 7.07 | 7.03 | 7.09 | 7.22 | 7.34 |
| 64 | 7.19 | 7.10 | 7.00 | 6.94 | 6.94 | 6.95 | 6.94 | 6.92 | 6.94 | 7.02 | 7.06 | 7.00 | 6.90 | 6.86 | 6.93 | 7.06 | 7.18 |
| 66 | 7.01 | 6.96 | 6.89 | 6.85 | 6.84 | 6.83 | 6.78 | 6.75 | 6.78 | 6.86 | 6.91 | 6.84 | 6.73 | 6.69 | 6.77 | 6.90 | 7.01 |
| 68 | 6.85 | 6.83 | 6.80 | 6.77 | 6.75 | 6.71 | 6.63 | 6.58 | 6.61 | 6.70 | 6.75 | 6.69 | 6.58 | 6.54 | 6.62 | 6.73 | 6.82 |
| 70 | 6.72 | 6.72 | 6.71 | 6.69 | 6.65 | 6.58 | 6.48 | 6.41 | 6.44 | 6.53 | 6.59 | 6.53 | 6.43 | 6.40 | 6.47 | 6.57 | 6.62 |
| 72 | 6.59 | 6.62 | 6.63 | 6.59 | 6.54 | 6.45 | 6.34 | 6.25 | 6.26 | 6.34 | 6.41 | 6.37 | 6.29 | 6.27 | 6.32 | 6.39 | 6.43 |
| 74 | 6.47 | 6.54 | 6.55 | 6.49 | 6.40 | 6.30 | 6.19 | 6.09 | 6.07 | 6.15 | 6.22 | 6.21 | 6.16 | 6.14 | 6.18 | 6.22 | 6.23 |
| 76 | 6.35 | 6.45 | 6.46 | 6.37 | 6.25 | 6.15 | 6.05 | 5.95 | 5.91 | 5.97 | 6.05 | 6.07 | 6.03 | 6.01 | 6.04 | 6.07 | 6.05 |
| 78 | 6.25 | 6.37 | 6.37 | 6.25 | 6.11 | 6.02 | 5.94 | 5.86 | 5.82 | 5.86 | 5.93 | 5.96 | 5.93 | 5.92 | 5.93 | 5.94 | 5.92 |
| 80 | 6.23 | 6.28 | 6.26 | 6.15 | 6.04 | 5.97 | 5.93 | 5.90 | 5.89 | 5.92 | 5.94 | 5.93 | 5.90 | 5.87 | 5.87 | 5.87 | 5.86 |

**OCTOBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5.76 | 6.12 | 6.45 | 6.52 | 6.39 | 6.21 | 6.09 | 6.03 | 6.00 | 6.02 | 6.09 | 6.20 | 6.31 | 6.42 | 6.48 | 6.49 | 6.45 |
| 20 | 5.66 | 6.05 | 6.42 | 6.53 | 6.43 | 6.29 | 6.20 | 6.15 | 6.13 | 6.13 | 6.18 | 6.25 | 6.33 | 6.41 | 6.45 | 6.43 | 6.37 |
| 22 | 5.81 | 6.14 | 6.44 | 6.54 | 6.48 | 6.40 | 6.34 | 6.31 | 6.29 | 6.29 | 6.32 | 6.35 | 6.39 | 6.42 | 6.44 | 6.39 | 6.32 |
| 24 | 6.11 | 6.33 | 6.51 | 6.56 | 6.53 | 6.51 | 6.49 | 6.48 | 6.46 | 6.47 | 6.48 | 6.47 | 6.46 | 6.45 | 6.43 | 6.37 | 6.28 |
| 26 | 6.47 | 6.57 | 6.61 | 6.60 | 6.59 | 6.61 | 6.63 | 6.63 | 6.63 | 6.63 | 6.63 | 6.58 | 6.53 | 6.48 | 6.44 | 6.35 | 6.24 |
| 28 | 6.86 | 6.83 | 6.74 | 6.66 | 6.65 | 6.71 | 6.77 | 6.79 | 6.78 | 6.78 | 6.76 | 6.69 | 6.60 | 6.53 | 6.45 | 6.34 | 6.21 |
| 30 | 7.23 | 7.08 | 6.89 | 6.76 | 6.74 | 6.81 | 6.90 | 6.93 | 6.94 | 6.93 | 6.89 | 6.80 | 6.69 | 6.59 | 6.49 | 6.35 | 6.20 |
| 32 | 7.56 | 7.33 | 7.06 | 6.88 | 6.85 | 6.94 | 7.04 | 7.08 | 7.09 | 7.07 | 7.01 | 6.91 | 6.79 | 6.68 | 6.56 | 6.39 | 6.22 |
| 34 | 7.83 | 7.55 | 7.24 | 7.03 | 6.99 | 7.07 | 7.18 | 7.24 | 7.25 | 7.22 | 7.15 | 7.03 | 6.91 | 6.80 | 6.66 | 6.46 | 6.27 |
| 36 | 8.03 | 7.74 | 7.42 | 7.21 | 7.16 | 7.23 | 7.34 | 7.40 | 7.41 | 7.37 | 7.29 | 7.17 | 7.06 | 6.94 | 6.78 | 6.57 | 6.37 |
| 38 | 8.19 | 7.90 | 7.59 | 7.39 | 7.34 | 7.40 | 7.50 | 7.57 | 7.57 | 7.53 | 7.44 | 7.33 | 7.22 | 7.09 | 6.92 | 6.71 | 6.51 |
| 40 | 8.29 | 8.02 | 7.74 | 7.57 | 7.52 | 7.58 | 7.66 | 7.73 | 7.73 | 7.68 | 7.59 | 7.49 | 7.38 | 7.26 | 7.08 | 6.87 | 6.68 |
| 42 | 8.36 | 8.11 | 7.87 | 7.73 | 7.70 | 7.74 | 7.81 | 7.87 | 7.88 | 7.83 | 7.74 | 7.64 | 7.55 | 7.42 | 7.25 | 7.04 | 6.88 |
| 44 | 8.38 | 8.16 | 7.96 | 7.85 | 7.84 | 7.87 | 7.93 | 7.98 | 7.99 | 7.94 | 7.86 | 7.78 | 7.69 | 7.57 | 7.40 | 7.22 | 7.09 |
| 46 | 8.38 | 8.18 | 8.01 | 7.94 | 7.93 | 7.97 | 8.01 | 8.06 | 8.07 | 8.02 | 7.95 | 7.88 | 7.80 | 7.68 | 7.52 | 7.38 | 7.29 |
| 48 | 8.34 | 8.16 | 8.01 | 7.96 | 7.98 | 8.01 | 8.04 | 8.08 | 8.09 | 8.06 | 8.00 | 7.94 | 7.86 | 7.74 | 7.61 | 7.51 | 7.46 |
| 50 | 8.27 | 8.10 | 7.97 | 7.94 | 7.96 | 7.99 | 8.02 | 8.04 | 8.06 | 8.04 | 7.99 | 7.94 | 7.87 | 7.75 | 7.64 | 7.59 | 7.60 |
| 52 | 8.17 | 8.01 | 7.89 | 7.87 | 7.89 | 7.92 | 7.94 | 7.96 | 7.97 | 7.96 | 7.93 | 7.89 | 7.82 | 7.71 | 7.63 | 7.63 | 7.68 |
| 54 | 8.04 | 7.90 | 7.79 | 7.76 | 7.78 | 7.81 | 7.82 | 7.83 | 7.84 | 7.84 | 7.83 | 7.79 | 7.72 | 7.62 | 7.57 | 7.61 | 7.71 |
| 56 | 7.89 | 7.76 | 7.66 | 7.63 | 7.65 | 7.67 | 7.67 | 7.67 | 7.67 | 7.68 | 7.69 | 7.66 | 7.58 | 7.49 | 7.47 | 7.55 | 7.69 |
| 58 | 7.73 | 7.62 | 7.53 | 7.49 | 7.50 | 7.51 | 7.51 | 7.48 | 7.48 | 7.50 | 7.52 | 7.50 | 7.42 | 7.34 | 7.35 | 7.47 | 7.62 |
| 60 | 7.56 | 7.47 | 7.39 | 7.34 | 7.35 | 7.36 | 7.34 | 7.29 | 7.28 | 7.31 | 7.35 | 7.33 | 7.25 | 7.19 | 7.22 | 7.36 | 7.52 |
| 62 | 7.38 | 7.33 | 7.26 | 7.21 | 7.20 | 7.21 | 7.17 | 7.10 | 7.07 | 7.12 | 7.17 | 7.15 | 7.07 | 7.03 | 7.09 | 7.24 | 7.40 |
| 64 | 7.22 | 7.19 | 7.13 | 7.08 | 7.07 | 7.07 | 7.01 | 6.92 | 6.88 | 6.93 | 7.00 | 6.99 | 6.91 | 6.88 | 6.97 | 7.13 | 7.28 |
| 66 | 7.06 | 7.05 | 7.00 | 6.95 | 6.94 | 6.93 | 6.85 | 6.74 | 6.69 | 6.75 | 6.83 | 6.83 | 6.76 | 6.75 | 6.85 | 7.02 | 7.15 |
| 68 | 6.90 | 6.92 | 6.88 | 6.83 | 6.81 | 6.78 | 6.69 | 6.56 | 6.51 | 6.58 | 6.67 | 6.68 | 6.62 | 6.63 | 6.75 | 6.91 | 7.03 |
| 70 | 6.75 | 6.78 | 6.75 | 6.70 | 6.67 | 6.63 | 6.52 | 6.40 | 6.35 | 6.42 | 6.52 | 6.53 | 6.49 | 6.52 | 6.66 | 6.81 | 6.91 |
| 72 | 6.60 | 6.63 | 6.62 | 6.56 | 6.51 | 6.45 | 6.35 | 6.23 | 6.20 | 6.26 | 6.36 | 6.38 | 6.37 | 6.42 | 6.57 | 6.71 | 6.79 |
| 74 | 6.43 | 6.47 | 6.46 | 6.40 | 6.33 | 6.26 | 6.17 | 6.09 | 6.06 | 6.12 | 6.20 | 6.24 | 6.26 | 6.33 | 6.48 | 6.61 | 6.67 |
| 76 | 6.24 | 6.30 | 6.29 | 6.23 | 6.14 | 6.07 | 6.02 | 5.97 | 5.97 | 6.01 | 6.06 | 6.10 | 6.15 | 6.25 | 6.40 | 6.52 | 6.58 |
| 78 | 6.04 | 6.10 | 6.11 | 6.06 | 5.98 | 5.93 | 5.91 | 5.92 | 5.94 | 5.96 | 5.98 | 6.01 | 6.08 | 6.19 | 6.34 | 6.47 | 6.54 |
| 80 | 5.83 | 5.90 | 5.94 | 5.92 | 5.89 | 5.89 | 5.94 | 6.01 | 6.05 | 6.04 | 6.01 | 6.01 | 6.07 | 6.19 | 6.35 | 6.50 | 6.61 |

60

ZONAL MEAN PRESSURE SCALE HT (KM)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

NOVEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.66 | 6.64 | 6.56 | 6.40 | 6.20 | 6.04 | 5.95 | 5.92 | 5.93 | 5.95 | 6.01 | 6.12 | 6.26 | 6.34 | 6.33 | 6.27 | 6.22 |
| 20 | 6.66 | 6.63 | 6.55 | 6.41 | 6.25 | 6.13 | 6.07 | 6.06 | 6.05 | 6.05 | 6.08 | 6.16 | 6.26 | 6.30 | 6.26 | 6.17 | 6.08 |
| 22 | 6.73 | 6.69 | 6.59 | 6.46 | 6.33 | 6.25 | 6.22 | 6.22 | 6.21 | 6.20 | 6.21 | 6.25 | 6.29 | 6.29 | 6.22 | 6.09 | 5.98 |
| 24 | 6.85 | 6.80 | 6.68 | 6.53 | 6.42 | 6.38 | 6.38 | 6.39 | 6.38 | 6.37 | 6.37 | 6.36 | 6.34 | 6.29 | 6.19 | 6.04 | 5.90 |
| 26 | 7.00 | 6.93 | 6.79 | 6.63 | 6.54 | 6.53 | 6.55 | 6.56 | 6.56 | 6.55 | 6.53 | 6.48 | 6.39 | 6.30 | 6.18 | 6.02 | 5.87 |
| 28 | 7.16 | 7.08 | 6.93 | 6.77 | 6.68 | 6.68 | 6.72 | 6.73 | 6.74 | 6.73 | 6.69 | 6.59 | 6.46 | 6.33 | 6.20 | 6.03 | 5.87 |
| 30 | 7.33 | 7.24 | 7.09 | 6.93 | 6.85 | 6.85 | 6.88 | 6.91 | 6.92 | 6.91 | 6.85 | 6.72 | 6.55 | 6.39 | 6.24 | 6.07 | 5.92 |
| 32 | 7.50 | 7.41 | 7.27 | 7.12 | 7.04 | 7.03 | 7.06 | 7.08 | 7.09 | 7.09 | 7.01 | 6.85 | 6.65 | 6.47 | 6.31 | 6.15 | 6.02 |
| 34 | 7.66 | 7.58 | 7.45 | 7.32 | 7.24 | 7.22 | 7.23 | 7.25 | 7.27 | 7.26 | 7.17 | 6.99 | 6.78 | 6.59 | 6.43 | 6.28 | 6.16 |
| 36 | 7.83 | 7.75 | 7.64 | 7.53 | 7.45 | 7.41 | 7.41 | 7.42 | 7.43 | 7.42 | 7.33 | 7.15 | 6.93 | 6.73 | 6.57 | 6.44 | 6.34 |
| 38 | 7.98 | 7.91 | 7.82 | 7.73 | 7.65 | 7.60 | 7.58 | 7.58 | 7.59 | 7.57 | 7.48 | 7.31 | 7.10 | 6.90 | 6.74 | 6.63 | 6.56 |
| 40 | 8.12 | 8.05 | 7.98 | 7.91 | 7.84 | 7.78 | 7.74 | 7.73 | 7.73 | 7.71 | 7.63 | 7.47 | 7.28 | 7.08 | 6.94 | 6.84 | 6.80 |
| 42 | 8.24 | 8.18 | 8.11 | 8.06 | 8.00 | 7.94 | 7.88 | 7.85 | 7.85 | 7.83 | 7.76 | 7.63 | 7.44 | 7.26 | 7.13 | 7.07 | 7.05 |
| 44 | 8.33 | 8.27 | 8.22 | 8.17 | 8.12 | 8.06 | 7.99 | 7.95 | 7.94 | 7.92 | 7.87 | 7.75 | 7.59 | 7.43 | 7.32 | 7.28 | 7.29 |
| 46 | 8.39 | 8.33 | 8.28 | 8.23 | 8.19 | 8.13 | 8.06 | 8.01 | 7.99 | 7.99 | 7.95 | 7.85 | 7.70 | 7.56 | 7.48 | 7.47 | 7.50 |
| 48 | 8.42 | 8.36 | 8.29 | 8.25 | 8.21 | 8.15 | 8.08 | 8.03 | 8.01 | 8.01 | 7.98 | 7.89 | 7.76 | 7.65 | 7.60 | 7.61 | 7.66 |
| 50 | 8.41 | 8.33 | 8.26 | 8.21 | 8.17 | 8.12 | 8.05 | 8.00 | 7.99 | 7.99 | 7.97 | 7.89 | 7.77 | 7.68 | 7.66 | 7.70 | 7.76 |
| 52 | 8.36 | 8.27 | 8.19 | 8.13 | 8.09 | 8.04 | 7.98 | 7.93 | 7.92 | 7.93 | 7.91 | 7.83 | 7.73 | 7.67 | 7.67 | 7.73 | 7.80 |
| 54 | 8.27 | 8.17 | 8.07 | 8.01 | 7.97 | 7.92 | 7.87 | 7.83 | 7.82 | 7.83 | 7.81 | 7.73 | 7.64 | 7.60 | 7.63 | 7.71 | 7.78 |
| 56 | 8.14 | 8.04 | 7.93 | 7.86 | 7.82 | 7.78 | 7.73 | 7.69 | 7.69 | 7.70 | 7.68 | 7.60 | 7.52 | 7.50 | 7.55 | 7.63 | 7.70 |
| 58 | 7.98 | 7.87 | 7.76 | 7.68 | 7.64 | 7.61 | 7.57 | 7.53 | 7.53 | 7.54 | 7.52 | 7.45 | 7.38 | 7.38 | 7.44 | 7.53 | 7.58 |
| 60 | 7.80 | 7.69 | 7.58 | 7.50 | 7.46 | 7.44 | 7.40 | 7.35 | 7.34 | 7.36 | 7.35 | 7.29 | 7.24 | 7.25 | 7.32 | 7.41 | 7.45 |
| 62 | 7.60 | 7.50 | 7.38 | 7.30 | 7.27 | 7.26 | 7.22 | 7.17 | 7.14 | 7.16 | 7.16 | 7.13 | 7.09 | 7.12 | 7.21 | 7.28 | 7.31 |
| 64 | 7.39 | 7.30 | 7.19 | 7.11 | 7.08 | 7.08 | 7.04 | 6.98 | 6.94 | 6.95 | 6.98 | 6.97 | 6.96 | 7.00 | 7.10 | 7.16 | 7.17 |
| 66 | 7.17 | 7.10 | 6.99 | 6.91 | 6.89 | 6.90 | 6.87 | 6.78 | 6.73 | 6.75 | 6.80 | 6.82 | 6.84 | 6.90 | 7.00 | 7.06 | 7.05 |
| 68 | 6.94 | 6.89 | 6.80 | 6.72 | 6.70 | 6.72 | 6.68 | 6.59 | 6.53 | 6.55 | 6.63 | 6.68 | 6.72 | 6.80 | 6.91 | 6.97 | 6.95 |
| 70 | 6.71 | 6.68 | 6.60 | 6.52 | 6.51 | 6.53 | 6.50 | 6.41 | 6.35 | 6.37 | 6.46 | 6.54 | 6.61 | 6.71 | 6.83 | 6.88 | 6.86 |
| 72 | 6.47 | 6.46 | 6.40 | 6.33 | 6.31 | 6.33 | 6.31 | 6.24 | 6.18 | 6.21 | 6.30 | 6.40 | 6.50 | 6.62 | 6.75 | 6.80 | 6.78 |
| 74 | 6.22 | 6.23 | 6.20 | 6.14 | 6.11 | 6.13 | 6.13 | 6.09 | 6.05 | 6.07 | 6.16 | 6.27 | 6.39 | 6.53 | 6.66 | 6.73 | 6.72 |
| 76 | 5.94 | 5.98 | 5.97 | 5.94 | 5.93 | 5.95 | 5.98 | 5.98 | 5.97 | 5.99 | 6.05 | 6.15 | 6.28 | 6.44 | 6.58 | 6.66 | 6.67 |
| 78 | 5.64 | 5.69 | 5.73 | 5.74 | 5.76 | 5.81 | 5.88 | 5.94 | 5.97 | 5.97 | 6.00 | 6.07 | 6.20 | 6.37 | 6.53 | 6.63 | 6.66 |
| 80 | 5.31 | 5.37 | 5.46 | 5.54 | 5.64 | 5.76 | 5.90 | 6.03 | 6.09 | 6.07 | 6.05 | 6.09 | 6.21 | 6.39 | 6.55 | 6.67 | 6.73 |

DECEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6.83 | 6.77 | 6.63 | 6.42 | 6.17 | 5.98 | 5.90 | 5.89 | 5.91 | 5.94 | 5.98 | 6.10 | 6.24 | 6.32 | 6.26 | 6.10 | 5.94 |
| 20 | 6.87 | 6.79 | 6.66 | 6.47 | 6.27 | 6.13 | 6.06 | 6.05 | 6.05 | 6.04 | 6.05 | 6.13 | 6.24 | 6.29 | 6.19 | 5.98 | 5.77 |
| 22 | 6.92 | 6.85 | 6.71 | 6.54 | 6.38 | 6.27 | 6.22 | 6.20 | 6.19 | 6.17 | 6.17 | 6.22 | 6.29 | 6.30 | 6.17 | 5.92 | 5.68 |
| 24 | 7.00 | 6.93 | 6.80 | 6.64 | 6.50 | 6.41 | 6.37 | 6.36 | 6.34 | 6.32 | 6.32 | 6.34 | 6.37 | 6.33 | 6.17 | 5.91 | 5.67 |
| 26 | 7.10 | 7.04 | 6.91 | 6.77 | 6.64 | 6.57 | 6.53 | 6.52 | 6.51 | 6.49 | 6.48 | 6.47 | 6.45 | 6.37 | 6.18 | 5.93 | 5.71 |
| 28 | 7.22 | 7.16 | 7.05 | 6.92 | 6.80 | 6.73 | 6.70 | 6.68 | 6.68 | 6.67 | 6.66 | 6.61 | 6.53 | 6.40 | 6.21 | 5.99 | 5.80 |
| 30 | 7.35 | 7.30 | 7.21 | 7.09 | 6.98 | 6.91 | 6.87 | 6.85 | 6.85 | 6.85 | 6.83 | 6.76 | 6.62 | 6.45 | 6.25 | 6.07 | 5.94 |
| 32 | 7.49 | 7.46 | 7.38 | 7.27 | 7.17 | 7.10 | 7.05 | 7.02 | 7.02 | 7.03 | 7.01 | 6.91 | 6.72 | 6.51 | 6.32 | 6.19 | 6.11 |
| 34 | 7.65 | 7.62 | 7.55 | 7.46 | 7.36 | 7.28 | 7.22 | 7.19 | 7.19 | 7.21 | 7.19 | 7.07 | 6.85 | 6.60 | 6.42 | 6.33 | 6.31 |
| 36 | 7.80 | 7.79 | 7.73 | 7.65 | 7.55 | 7.47 | 7.40 | 7.35 | 7.35 | 7.37 | 7.36 | 7.23 | 6.99 | 6.72 | 6.55 | 6.49 | 6.52 |
| 38 | 7.96 | 7.95 | 7.91 | 7.83 | 7.73 | 7.64 | 7.56 | 7.51 | 7.49 | 7.52 | 7.52 | 7.39 | 7.14 | 6.87 | 6.70 | 6.67 | 6.73 |
| 40 | 8.11 | 8.10 | 8.06 | 7.99 | 7.90 | 7.80 | 7.71 | 7.64 | 7.63 | 7.65 | 7.66 | 7.55 | 7.30 | 7.03 | 6.87 | 6.86 | 6.95 |
| 42 | 8.25 | 8.24 | 8.20 | 8.12 | 8.03 | 7.94 | 7.84 | 7.76 | 7.74 | 7.77 | 7.79 | 7.69 | 7.46 | 7.20 | 7.05 | 7.06 | 7.15 |
| 44 | 8.38 | 8.36 | 8.30 | 8.22 | 8.13 | 8.05 | 7.95 | 7.86 | 7.83 | 7.86 | 7.88 | 7.80 | 7.59 | 7.35 | 7.22 | 7.24 | 7.33 |
| 46 | 8.47 | 8.44 | 8.37 | 8.29 | 8.20 | 8.11 | 8.02 | 7.93 | 7.90 | 7.93 | 7.95 | 7.87 | 7.68 | 7.48 | 7.38 | 7.40 | 7.48 |
| 48 | 8.53 | 8.49 | 8.41 | 8.31 | 8.22 | 8.14 | 8.05 | 7.97 | 7.94 | 7.97 | 7.98 | 7.89 | 7.72 | 7.56 | 7.50 | 7.53 | 7.60 |
| 50 | 8.55 | 8.49 | 8.39 | 8.29 | 8.20 | 8.13 | 8.05 | 7.90 | 7.96 | 7.98 | 7.97 | 7.87 | 7.71 | 7.59 | 7.57 | 7.63 | 7.69 |
| 52 | 8.53 | 8.46 | 8.34 | 8.22 | 8.14 | 8.08 | 8.01 | 7.95 | 7.94 | 7.95 | 7.92 | 7.80 | 7.65 | 7.57 | 7.60 | 7.68 | 7.73 |
| 54 | 8.47 | 8.38 | 8.25 | 8.12 | 8.04 | 7.98 | 7.93 | 7.89 | 7.89 | 7.90 | 7.84 | 7.69 | 7.54 | 7.51 | 7.58 | 7.68 | 7.73 |
| 56 | 8.36 | 8.26 | 8.12 | 7.98 | 7.90 | 7.85 | 7.81 | 7.79 | 7.80 | 7.81 | 7.72 | 7.55 | 7.41 | 7.41 | 7.52 | 7.65 | 7.70 |
| 58 | 8.21 | 8.10 | 7.95 | 7.81 | 7.73 | 7.69 | 7.66 | 7.65 | 7.68 | 7.68 | 7.58 | 7.40 | 7.27 | 7.29 | 7.44 | 7.58 | 7.63 |
| 60 | 8.02 | 7.91 | 7.76 | 7.61 | 7.53 | 7.50 | 7.48 | 7.49 | 7.52 | 7.52 | 7.42 | 7.24 | 7.12 | 7.17 | 7.34 | 7.49 | 7.53 |
| 62 | 7.80 | 7.70 | 7.54 | 7.40 | 7.31 | 7.29 | 7.28 | 7.30 | 7.33 | 7.34 | 7.25 | 7.09 | 6.99 | 7.06 | 7.24 | 7.38 | 7.42 |
| 64 | 7.55 | 7.46 | 7.31 | 7.17 | 7.08 | 7.07 | 7.07 | 7.09 | 7.12 | 7.13 | 7.06 | 6.94 | 6.88 | 6.96 | 7.14 | 7.27 | 7.29 |
| 66 | 7.29 | 7.20 | 7.06 | 6.93 | 6.85 | 6.84 | 6.86 | 6.87 | 6.89 | 6.90 | 6.86 | 6.79 | 6.78 | 6.88 | 7.04 | 7.15 | 7.16 |
| 68 | 7.00 | 6.93 | 6.81 | 6.68 | 6.61 | 6.61 | 6.64 | 6.66 | 6.66 | 6.67 | 6.66 | 6.65 | 6.69 | 6.80 | 6.95 | 7.04 | 7.03 |
| 70 | 6.70 | 6.65 | 6.54 | 6.43 | 6.38 | 6.40 | 6.44 | 6.45 | 6.44 | 6.44 | 6.46 | 6.51 | 6.60 | 6.73 | 6.87 | 6.94 | 6.93 |
| 72 | 6.39 | 6.35 | 6.27 | 6.19 | 6.16 | 6.20 | 6.25 | 6.26 | 6.24 | 6.23 | 6.28 | 6.37 | 6.50 | 6.65 | 6.78 | 6.84 | 6.84 |
| 74 | 6.07 | 6.05 | 5.99 | 5.95 | 5.96 | 6.02 | 6.08 | 6.10 | 6.07 | 6.06 | 6.11 | 6.23 | 6.39 | 6.56 | 6.69 | 6.76 | 6.79 |
| 76 | 5.73 | 5.73 | 5.71 | 5.72 | 5.77 | 5.87 | 5.96 | 5.98 | 5.95 | 5.93 | 5.98 | 6.11 | 6.29 | 6.46 | 6.60 | 6.70 | 6.76 |
| 78 | 5.39 | 5.40 | 5.43 | 5.49 | 5.61 | 5.75 | 5.87 | 5.93 | 5.91 | 5.88 | 5.91 | 6.03 | 6.21 | 6.39 | 6.54 | 6.66 | 6.74 |
| 80 | 5.03 | 5.05 | 5.13 | 5.28 | 5.47 | 5.67 | 5.85 | 5.96 | 5.98 | 5.95 | 5.96 | 6.05 | 6.23 | 6.41 | 6.56 | 6.66 | 6.72 |

61

ZONAL MEAN GEOSTROPHIC W-E WIND (M/S)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **JANUARY** | | | | | | | | | | | | | | | | | |
| 18 | 0 | 2 | 6 | 9 | 8 | 3 | -3 | -5 | - | 3 | 15 | 21 | 21 | 19 | 16 | 13 | 8 |
| 20 | 0 | 1 | 3 | 4 | 3 | -2 | -7 | -8 | - | 1 | 10 | 16 | 18 | 19 | 20 | 18 | 11 |
| 22 | -1 | 0 | 0 | 0 | -2 | -6 | -10 | -12 | - | 1 | 6 | 11 | 16 | 21 | 25 | 23 | 14 |
| 24 | -1 | -1 | -2 | -4 | -6 | -10 | -13 | -16 | - | 1 | 3 | 8 | 14 | 23 | 30 | 29 | 18 |
| 26 | -1 | -2 | -4 | -7 | -10 | -13 | -16 | -19 | - | 0 | 1 | 6 | 14 | 25 | 34 | 34 | 2? |
| 28 | -1 | -3 | -6 | -10 | -13 | -17 | -19 | -22 | - | -1 | 0 | 5 | 14 | 27 | 38 | 38 | ? |
| 30 | -1 | -4 | -8 | -13 | -17 | -20 | -23 | -24 | - | -2 | 0 | 5 | 15 | 28 | 40 | 42 | 27 |
| 32 | -1 | -4 | -10 | -15 | -20 | -24 | -26 | -26 | - | -3 | 1 | 7 | 16 | 29 | 42 | 44 | 29 |
| 34 | -1 | -5 | -11 | -18 | -24 | -28 | -29 | -29 | - | -4 | 3 | 10 | 18 | 30 | 43 | 46 | 30 |
| 36 | -1 | -5 | -13 | -21 | -27 | -31 | -33 | -31 | - | -4 | 6 | 13 | 20 | 32 | 44 | 47 | 31 |
| 38 | -1 | -6 | -14 | -23 | -31 | -35 | -37 | -34 | - | -4 | 8 | 16 | 23 | 33 | 45 | 48 | 32 |
| 40 | -1 | -6 | -16 | -26 | -34 | -39 | -41 | -37 | - | -5 | 11 | 20 | 26 | 35 | 46 | 49 | 33 |
| 42 | -1 | -6 | -17 | -29 | -37 | -42 | -45 | -40 | - | -6 | 13 | 23 | 29 | 37 | 48 | 50 | 34 |
| 44 | -1 | -7 | -19 | -31 | -40 | -46 | -48 | -42 | - | -7 | 15 | 27 | 32 | 39 | 49 | 51 | 34 |
| 46 | -1 | -8 | -21 | -33 | -42 | -48 | -51 | -44 | - | -9 | 17 | 30 | 36 | 42 | 51 | 52 | 35 |
| 48 | -1 | -9 | -23 | -36 | -45 | -51 | -53 | -46 | - | -10 | 19 | 34 | 39 | 44 | 52 | 53 | 35 |
| 50 | -2 | -10 | -24 | -38 | -47 | -52 | -54 | -46 | - | -10 | 22 | 38 | 43 | 46 | 53 | 53 | 35 |
| 52 | -2 | -12 | -26 | -40 | -48 | -53 | -55 | -45 | - | -9 | 25 | 42 | 46 | 48 | 53 | 52 | 34 |
| 54 | -3 | -13 | -29 | -42 | -50 | -53 | -54 | -43 | - | -6 | 30 | 47 | 49 | 49 | 51 | 50 | 33 |
| 56 | -4 | -15 | -31 | -44 | -51 | -53 | -52 | -39 | - | -1 | 36 | 52 | 52 | 49 | 49 | 48 | 31 |
| 58 | -4 | -16 | -33 | -46 | -52 | -52 | -48 | -34 | - | 6 | 43 | 58 | 55 | 48 | 46 | 44 | 29 |
| 60 | -5 | -18 | -36 | -48 | -52 | -50 | -44 | -27 | - | 14 | 50 | 63 | 57 | 47 | 43 | 40 | 26 |
| 62 | -6 | -20 | -38 | -50 | -53 | -48 | -39 | -20 | - | 22 | 57 | 68 | 59 | 46 | 39 | 36 | 24 |
| 64 | -7 | -21 | -40 | -53 | -53 | -45 | -33 | -12 | - | 30 | 63 | 72 | 60 | 44 | 36 | 32 | 21 |
| 66 | -7 | -23 | -43 | -54 | -53 | -42 | -27 | -4 | - | 36 | 68 | 74 | 61 | 43 | 33 | 28 | 19 |
| 68 | -8 | -24 | -44 | -56 | -52 | -39 | -22 | 2 | - | 39 | 69 | 75 | 61 | 41 | 31 | 26 | 17 |
| 70 | -8 | -25 | -46 | -57 | -52 | -36 | -17 | 7 | - | 39 | 69 | 74 | 60 | 40 | 29 | 24 | 16 |
| 72 | -8 | -26 | -46 | -57 | -50 | -32 | -13 | 10 | - | 37 | 65 | 71 | 57 | 38 | 27 | 23 | 16 |
| 74 | -8 | -25 | -46 | -55 | -47 | -28 | -10 | 10 | - | 32 | 60 | 67 | 54 | 36 | 26 | 23 | 16 |
| 76 | -8 | -25 | -44 | -52 | -43 | -24 | -8 | 7 | - | 26 | 53 | 61 | 50 | 33 | 24 | 22 | 16 |
| 78 | -8 | -23 | -41 | -47 | -37 | -19 | -6 | 2 | - | 20 | 46 | 55 | 45 | 29 | 22 | 22 | 16 |
| 80 | -8 | -22 | -36 | -40 | -28 | -12 | -4 | -3 | - | 15 | 41 | 50 | 40 | 25 | 19 | 22 | 17 |
| **FEBRUARY** | | | | | | | | | | | | | | | | | |
| 18 | 3 | 7 | 11 | 12 | 7 | 0 | -5 | -1 | - | 3 | 16 | 22 | 21 | 19 | 17 | 14 | 9 |
| 20 | 3 | 6 | 9 | 8 | 3 | -5 | -10 | -6 | - | 0 | 11 | 15 | 17 | 18 | 19 | 18 | 11 |
| 22 | 2 | 5 | 7 | 5 | -1 | -10 | -15 | -13 | - | -2 | 6 | 11 | 14 | 18 | 22 | 21 | 13 |
| 24 | 2 | 4 | 5 | 3 | -4 | -13 | -19 | -19 | - | -3 | 4 | 8 | 12 | 18 | 24 | 25 | 16 |
| 26 | 2 | 4 | 4 | 0 | -7 | -15 | -22 | -23 | - | -5 | 2 | 7 | 11 | 18 | 26 | 27 | 18 |
| 28 | 3 | 4 | 2 | -2 | -9 | -18 | -25 | -27 | - | -7 | 2 | 8 | 13 | 19 | 27 | 28 | 19 |
| 30 | 3 | 4 | 1 | -4 | -11 | -19 | -27 | -30 | - | -10 | 3 | 11 | 15 | 20 | 27 | 29 | 20 |
| 32 | 4 | 4 | 0 | -6 | -12 | -21 | -30 | -33 | - | -12 | 5 | 15 | 18 | 22 | 27 | 29 | 20 |
| 34 | 4 | 4 | -1 | -7 | -14 | -22 | -32 | -35 | - | -15 | 7 | 19 | 22 | 24 | 28 | 30 | 20 |
| 36 | 5 | 4 | -2 | -9 | -15 | -23 | -34 | -37 | - | -16 | 10 | 24 | 26 | 26 | 30 | 31 | 21 |
| 38 | 5 | 4 | -3 | -10 | -16 | -25 | -35 | -38 | - | -17 | 13 | 29 | 31 | 30 | 32 | 32 | 22 |
| 40 | 6 | 4 | -3 | -11 | -18 | -26 | -36 | -38 | - | -17 | 16 | 34 | 36 | 33 | 35 | 34 | 23 |
| 42 | 6 | 4 | -4 | -12 | -19 | -27 | -36 | -35 | - | -16 | 20 | 38 | 40 | 38 | 38 | 36 | 24 |
| 44 | 6 | 4 | -4 | -13 | -21 | -28 | -36 | -31 | - | -15 | 23 | 42 | 45 | 42 | 41 | 39 | 25 |
| 46 | 6 | 4 | -4 | -15 | -23 | -29 | -34 | -26 | - | -12 | 27 | 46 | 49 | 46 | 45 | 41 | 26 |
| 48 | 6 | 4 | -5 | -16 | -24 | -30 | -32 | -19 | - | -9 | 31 | 51 | 53 | 50 | 47 | 42 | 26 |
| 50 | 6 | 4 | -6 | -17 | -26 | -31 | -30 | -12 | - | -6 | 36 | 55 | 57 | 53 | 49 | 42 | 26 |
| 52 | 5 | 3 | -7 | -18 | -27 | -31 | -27 | -5 | - | -2 | 40 | 59 | 60 | 54 | 49 | 41 | 25 |
| 54 | 5 | 2 | -8 | -20 | -28 | -30 | -25 | 1 | - | 2 | 45 | 63 | 63 | 55 | 47 | 39 | 23 |
| 56 | 4 | 1 | -10 | -21 | -28 | -29 | -22 | 5 | - | 6 | 50 | 67 | 65 | 54 | 44 | 35 | 21 |
| 58 | 3 | -1 | -12 | -23 | -28 | -27 | -19 | 8 | - | 10 | 54 | 71 | 66 | 53 | 40 | 30 | 17 |
| 60 | 2 | -3 | -15 | -24 | -28 | -25 | -16 | 10 | - | 15 | 59 | 74 | 67 | 50 | 35 | 24 | 14 |
| 62 | 1 | -6 | -18 | -26 | -27 | -22 | -13 | 10 | - | 19 | 62 | 77 | 68 | 48 | 30 | 19 | 10 |
| 64 | -1 | -8 | -21 | -28 | -26 | -19 | -10 | 10 | - | 23 | 64 | 79 | 68 | 45 | 25 | 14 | 7 |
| 66 | -2 | -11 | -23 | -29 | -25 | -15 | -7 | 9 | - | 26 | 65 | 79 | 67 | 42 | 21 | 9 | 4 |
| 68 | -3 | -13 | -26 | -30 | -23 | -12 | -3 | 8 | - | 28 | 65 | 79 | 66 | 40 | 18 | 6 | 2 |
| 70 | -4 | -15 | -28 | -31 | -21 | -8 | -1 | 7 | - | 27 | 63 | 77 | 65 | 38 | 15 | 4 | 2 |
| 72 | -4 | -16 | -28 | -30 | -19 | -5 | 1 | 5 | - | 24 | 59 | 74 | 62 | 35 | 13 | 3 | 1 |
| 74 | -5 | -16 | -28 | -29 | -17 | -2 | 2 | 2 | - | 17 | 54 | 70 | 58 | 32 | 11 | 3 | 2 |
| 76 | -5 | -16 | -27 | -27 | -13 | 0 | 1 | -1 | - | 8 | 48 | 66 | 54 | 28 | 9 | 3 | 2 |
| 78 | -5 | -15 | -24 | -23 | -9 | 2 | -1 | -5 | - | -2 | 42 | 62 | 50 | 24 | 6 | 2 | 3 |
| 80 | -5 | -14 | -21 | -17 | -3 | 5 | -2 | -8 | - | -11 | 38 | 58 | 45 | 19 | 3 | 3 | 4 |

62

ZONAL MEAN GEOSTROPHIC W-E WIND (M/S)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MARCH |
| 18 | 7 | 13 | 16 | 15 | 10 | 2 | -3 | -3 | - | 10 | 15 | 15 | 14 | 13 | 15 | 15 | 10 |
| 20 | 7 | 12 | 15 | 13 | 6 | -2 | -8 | -8 | - | 4 | 9 | 11 | 11 | 12 | 14 | 15 | 10 |
| 22 | 7 | 13 | 14 | 11 | 3 | -5 | -12 | -13 | - | 1 | 5 | 8 | 9 | 11 | 14 | 15 | 10 |
| 24 | 8 | 13 | 13 | 9 | 2 | -7 | -14 | -18 | - | -2 | 3 | 7 | 9 | 11 | 14 | 15 | 10 |
| 26 | 9 | 14 | 13 | 9 | 1 | -8 | -16 | -21 | - | -4 | 2 | 7 | 10 | 12 | 14 | 14 | 9 |
| 28 | 10 | 15 | 14 | 8 | 1 | -7 | -16 | -24 | - | -6 | 2 | 9 | 12 | 13 | 13 | 12 | 8 |
| 30 | 11 | 16 | 14 | 9 | 2 | -7 | -16 | -25 | - | -7 | 3 | 12 | 16 | 15 | 13 | 12 | 7 |
| 32 | 12 | 18 | 15 | 9 | 2 | -6 | -16 | -25 | - | -8 | 5 | 16 | 19 | 17 | 14 | 11 | 7 |
| 34 | 13 | 19 | 17 | 11 | 3 | -5 | -14 | -24 | - | -7 | 7 | 19 | 23 | 20 | 16 | 12 | 7 |
| 36 | 14 | 21 | 19 | 12 | 4 | -4 | -13 | -21 | - | -5 | 10 | 22 | 26 | 23 | 18 | 13 | 7 |
| 38 | 16 | 23 | 21 | 14 | 5 | -3 | -11 | -17 | - | -2 | 13 | 25 | 29 | 27 | 21 | 15 | 8 |
| 40 | 17 | 26 | 24 | 15 | 6 | -2 | -8 | -12 | - | 2 | 16 | 27 | 32 | 30 | 25 | 18 | 9 |
| 42 | 18 | 28 | 26 | 17 | 7 | -1 | -5 | -5 | - | 8 | 20 | 29 | 34 | 33 | 28 | 20 | 11 |
| 44 | 20 | 30 | 29 | 19 | 7 | -1 | -1 | 3 | - | 14 | 24 | 31 | 36 | 36 | 31 | 23 | 12 |
| 46 | 21 | 33 | 31 | 20 | 7 | 0 | 2 | 12 | - | 21 | 28 | 33 | 37 | 38 | 34 | 26 | 14 |
| 48 | 22 | 34 | 33 | 21 | 7 | 1 | 6 | 21 | - | 27 | 32 | 35 | 38 | 40 | 37 | 27 | 15 |
| 50 | 22 | 35 | 35 | 22 | 7 | 1 | 9 | 29 | - | 33 | 36 | 37 | 39 | 41 | 38 | 28 | 15 |
| 52 | 22 | 36 | 36 | 23 | 7 | 1 | 12 | 35 | - | 38 | 40 | 39 | 40 | 42 | 38 | 28 | 15 |
| 54 | 22 | 35 | 36 | 23 | 8 | 2 | 14 | 40 | - | 42 | 43 | 40 | 41 | 42 | 38 | 27 | 14 |
| 56 | 21 | 34 | 35 | 23 | 8 | 3 | 16 | 43 | - | 45 | 45 | 42 | 42 | 42 | 37 | 26 | 13 |
| 58 | 20 | 32 | 34 | 23 | 9 | 5 | 17 | 43 | - | 46 | 47 | 43 | 42 | 42 | 36 | 25 | 12 |
| 60 | 18 | 30 | 32 | 23 | 11 | 7 | 18 | 41 | - | 47 | 47 | 44 | 43 | 41 | 35 | 23 | 11 |
| 62 | 16 | 27 | 29 | 22 | 13 | 10 | 19 | 37 | - | 47 | 47 | 45 | 44 | 41 | 33 | 22 | 10 |
| 64 | 15 | 24 | 26 | 21 | 15 | 13 | 20 | 31 | - | 45 | 46 | 45 | 44 | 41 | 32 | 21 | 10 |
| 66 | 13 | 21 | 23 | 20 | 17 | 17 | 21 | 25 | - | 42 | 44 | 45 | 45 | 40 | 32 | 21 | 10 |
| 68 | 12 | 19 | 19 | 18 | 19 | 21 | 22 | 17 | - | 38 | 40 | 45 | 45 | 39 | 31 | 21 | 11 |
| 70 | 11 | 16 | 16 | 17 | 21 | 25 | 22 | 9 | - | 32 | 36 | 43 | 44 | 38 | 30 | 22 | 12 |
| 72 | 11 | 15 | 13 | 15 | 23 | 28 | 22 | 2 | - | 24 | 31 | 41 | 43 | 37 | 30 | 23 | 13 |
| 74 | 11 | 13 | 11 | 14 | 24 | 30 | 21 | -4 | - | 15 | 26 | 38 | 41 | 35 | 29 | 24 | 15 |
| 76 | 10 | 12 | 9 | 13 | 24 | 30 | 18 | -8 | - | 5 | 20 | 35 | 38 | 32 | 28 | 25 | 16 |
| 78 | 10 | 12 | 8 | 12 | 23 | 29 | 16 | -10 | - | -5 | 15 | 32 | 35 | 29 | 27 | 26 | 18 |
| 80 | 10 | 11 | 8 | 11 | 23 | 28 | 15 | -10 | - | -11 | 13 | 31 | 32 | 26 | 25 | 27 | 19 |
| APRIL |
| 18 | 7 | 14 | 19 | 20 | 16 | 9 | 3 | -1 | - | 13 | 12 | 12 | 10 | 6 | 2 | -1 | -1 |
| 20 | 10 | 17 | 20 | 18 | 12 | 5 | -2 | -7 | - | 7 | 7 | 8 | 7 | 4 | 1 | -2 | -2 |
| 22 | 12 | 21 | 22 | 18 | 10 | 2 | -5 | -13 | - | 1 | 3 | 5 | 5 | 3 | -1 | -2 | -2 |
| 24 | 15 | 24 | 24 | 18 | 10 | 1 | -8 | -17 | - | -4 | 0 | 5 | 5 | 2 | -2 | -3 | -2 |
| 26 | 18 | 28 | 27 | 20 | 12 | 2 | -9 | -21 | - | -8 | -1 | 6 | 6 | 2 | -3 | -4 | -3 |
| 28 | 20 | 31 | 30 | 23 | 14 | 4 | -8 | -23 | - | -10 | -1 | 8 | 8 | 3 | -3 | -5 | -3 |
| 30 | 21 | 33 | 33 | 27 | 18 | 8 | -7 | -23 | - | -11 | 0 | 9 | 10 | 4 | -2 | -4 | -3 |
| 32 | 22 | 35 | 37 | 31 | 23 | 11 | -3 | -20 | - | -9 | 2 | 11 | 11 | 5 | -1 | -3 | -2 |
| 34 | 23 | 38 | 41 | 36 | 27 | 16 | 1 | -15 | - | -5 | 4 | 12 | 13 | 7 | 1 | -1 | -1 |
| 36 | 24 | 40 | 44 | 41 | 32 | 20 | 6 | -8 | - | -1 | 6 | 12 | 13 | 9 | 4 | 1 | 0 |
| 38 | 25 | 42 | 49 | 46 | 37 | 24 | 12 | 1 | - | 5 | 8 | 12 | 14 | 11 | 7 | 4 | 1 |
| 40 | 25 | 44 | 53 | 51 | 41 | 29 | 18 | 10 | - | 11 | 11 | 12 | 13 | 13 | 10 | 6 | 3 |
| 42 | 26 | 46 | 57 | 56 | 45 | 32 | 24 | 20 | - | 18 | 13 | 11 | 13 | 15 | 14 | 9 | 4 |
| 44 | 26 | 48 | 60 | 60 | 49 | 36 | 29 | 29 | - | 24 | 15 | 10 | 12 | 16 | 16 | 12 | 6 |
| 46 | 26 | 49 | 64 | 64 | 53 | 39 | 34 | 37 | - | 29 | 17 | 9 | 11 | 17 | 19 | 14 | 7 |
| 48 | 26 | 50 | 66 | 68 | 56 | 42 | 38 | 44 | - | 34 | 19 | 9 | 10 | 17 | 20 | 15 | 8 |
| 50 | 25 | 50 | 68 | 71 | 58 | 44 | 41 | 49 | - | 38 | 20 | 8 | 9 | 18 | 21 | 16 | 8 |
| 52 | 24 | 49 | 69 | 72 | 61 | 46 | 44 | 52 | - | 42 | 21 | 7 | 8 | 18 | 22 | 17 | 8 |
| 54 | 23 | 48 | 68 | 74 | 62 | 48 | 45 | 53 | - | 44 | 21 | 6 | 8 | 17 | 22 | 17 | 8 |
| 56 | 21 | 45 | 67 | 74 | 64 | 49 | 45 | 52 | - | 45 | 21 | 5 | 7 | 17 | 22 | 17 | 8 |
| 58 | 18 | 42 | 65 | 74 | 65 | 50 | 45 | 50 | - | 45 | 20 | 5 | 6 | 17 | 22 | 17 | 8 |
| 60 | 16 | 39 | 62 | 73 | 65 | 51 | 44 | 45 | - | 43 | 18 | 4 | 6 | 16 | 21 | 17 | 8 |
| 62 | 13 | 35 | 59 | 71 | 66 | 52 | 43 | 39 | - | 38 | 15 | 3 | 6 | 16 | 21 | 17 | 8 |
| 64 | 11 | 32 | 55 | 69 | 66 | 53 | 41 | 32 | - | 31 | 11 | 2 | 6 | 16 | 20 | 16 | 8 |
| 66 | 10 | 28 | 51 | 66 | 66 | 54 | 38 | 23 | - | 22 | 6 | 1 | 6 | 15 | 19 | 16 | 8 |
| 68 | 9 | 25 | 47 | 63 | 66 | 54 | 35 | 12 | - | 10 | 1 | 0 | 7 | 14 | 18 | 16 | 9 |
| 70 | 8 | 23 | 43 | 60 | 65 | 54 | 31 | 2 | - | -2 | -6 | 0 | 7 | 13 | 17 | 15 | 9 |
| 72 | 8 | 21 | 39 | 56 | 63 | 53 | 26 | -9 | - | -15 | -12 | -1 | 7 | 12 | 15 | 15 | 10 |
| 74 | 7 | 18 | 34 | 51 | 60 | 51 | 22 | -18 | - | -26 | -17 | -2 | 7 | 11 | 13 | 14 | 10 |
| 76 | 7 | 16 | 30 | 47 | 57 | 48 | 18 | -23 | - | -34 | -21 | -4 | 6 | 9 | 12 | 14 | 10 |
| 78 | 6 | 13 | 26 | 42 | 53 | 45 | 15 | -25 | - | -37 | -22 | -5 | 5 | 8 | 11 | 14 | 11 |
| 80 | 5 | 11 | 22 | 37 | 49 | 43 | 15 | -23 | - | -37 | -21 | -4 | 4 | 7 | 11 | 15 | 11 |

63

ZONAL MEAN GEOSTROPHIC W-E WIND (M/S)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MAY** | | | | | | | | | | | | | | | | | |
| 18 | 14 | 21 | 22 | 20 | 18 | 16 | 10 | 1 | - | 3 | 5 | 8 | 7 | 3 | 0 | -1 | 0 |
| 20 | 17 | 27 | 27 | 21 | 16 | 11 | 5 | -3 | - | -2 | 1 | 4 | 3 | 0 | -2 | -2 | -1 |
| 22 | 21 | 33 | 33 | 24 | 15 | 8 | 2 | -6 | - | -6 | -3 | 1 | 1 | -1 | -3 | -3 | -1 |
| 24 | 25 | 40 | 39 | 28 | 16 | 7 | 0 | -7 | - | -11 | -6 | -1 | 0 | -1 | -3 | -3 | -2 |
| 26 | 28 | 44 | 45 | 33 | 19 | 8 | -1 | -8 | - | -14 | -7 | -1 | 0 | -2 | -4 | -4 | -3 |
| 28 | 30 | 48 | 50 | 39 | 25 | 11 | 0 | -7 | - | -15 | -7 | -1 | 0 | -2 | -4 | -5 | -3 |
| 30 | 31 | 50 | 54 | 46 | 31 | 16 | 3 | -5 | - | -15 | -7 | -1 | 1 | -2 | -5 | -5 | -3 |
| 32 | 31 | 51 | 58 | 52 | 39 | 23 | 8 | -2 | - | -13 | -6 | -1 | 0 | -2 | -5 | -6 | -4 |
| 34 | 31 | 52 | 61 | 58 | 47 | 31 | 14 | 3 | - | -11 | -5 | -1 | 0 | -2 | -5 | -5 | -4 |
| 36 | 30 | 52 | 63 | 64 | 56 | 39 | 21 | 8 | - | -7 | -4 | -2 | -1 | -2 | -4 | -5 | -3 |
| 38 | 28 | 51 | 66 | 70 | 64 | 48 | 29 | 13 | - | -5 | -4 | -3 | -2 | -3 | -4 | -4 | -3 |
| 40 | 27 | 51 | 68 | 76 | 72 | 57 | 37 | 18 | - | -3 | -4 | -4 | -4 | -4 | -4 | -4 | -2 |
| 42 | 26 | 51 | 71 | 81 | 80 | 65 | 44 | 23 | - | -1 | -5 | -6 | -5 | -4 | -4 | -3 | -2 |
| 44 | 25 | 50 | 72 | 86 | 87 | 73 | 51 | 27 | - | -1 | -7 | -8 | -7 | -5 | -4 | -3 | -2 |
| 46 | 24 | 50 | 74 | 90 | 93 | 80 | 56 | 29 | - | -2 | -9 | -10 | -8 | -6 | -4 | -2 | -1 |
| 48 | 24 | 50 | 75 | 93 | 98 | 86 | 61 | 31 | - | -2 | -11 | -12 | -10 | -7 | -4 | -3 | -1 |
| 50 | 23 | 49 | 75 | 94 | 101 | 91 | 66 | 32 | - | -3 | -13 | -14 | -11 | -8 | -5 | -3 | -1 |
| 52 | 23 | 48 | 74 | 95 | 104 | 96 | 70 | 32 | - | -3 | -15 | -15 | -12 | -9 | -6 | -4 | -2 |
| 54 | 23 | 47 | 73 | 94 | 105 | 99 | 73 | 31 | - | -3 | -16 | -17 | -13 | -10 | -7 | -5 | -2 |
| 56 | 23 | 46 | 70 | 92 | 105 | 101 | 75 | 30 | - | -3 | -18 | -18 | -14 | -11 | -9 | -6 | -3 |
| 58 | 23 | 45 | 67 | 89 | 103 | 102 | 77 | 29 | - | -3 | -19 | -19 | -15 | -12 | -10 | -7 | -3 |
| 60 | 23 | 44 | 64 | 85 | 101 | 103 | 77 | 26 | - | -5 | -21 | -19 | -15 | -13 | -12 | -8 | -4 |
| 62 | 23 | 43 | 61 | 81 | 99 | 101 | 76 | 23 | - | -10 | -23 | -20 | -15 | -15 | -14 | -10 | -5 |
| 64 | 24 | 42 | 58 | 77 | 95 | 99 | 73 | 19 | - | -16 | -26 | -19 | -15 | -16 | -15 | -11 | -5 |
| 66 | 24 | 42 | 55 | 72 | 91 | 95 | 67 | 13 | - | -26 | -29 | -19 | -15 | -17 | -17 | -13 | -6 |
| 68 | 25 | 41 | 52 | 68 | 86 | 89 | 60 | 7 | - | -38 | -32 | -18 | -14 | -18 | -19 | -14 | -6 |
| 70 | 26 | 41 | 49 | 63 | 81 | 82 | 51 | 0 | - | -51 | -35 | -17 | -13 | -19 | -21 | -14 | -6 |
| 72 | 26 | 40 | 46 | 59 | 74 | 73 | 41 | -6 | - | -64 | -38 | -15 | -12 | -20 | -22 | -15 | -5 |
| 74 | 26 | 39 | 43 | 53 | 67 | 64 | 32 | -12 | - | -75 | -39 | -13 | -11 | -20 | -23 | -15 | -5 |
| 76 | 25 | 37 | 39 | 48 | 60 | 56 | 24 | -15 | - | -82 | -39 | -11 | -10 | -21 | -24 | -14 | -4 |
| 78 | 24 | 34 | 35 | 42 | 53 | 48 | 18 | -16 | - | -84 | -36 | -8 | -8 | -20 | -23 | -13 | -3 |
| 80 | 23 | 31 | 31 | 37 | 47 | 43 | 15 | -12 | - | -82 | -30 | -3 | -6 | -18 | -21 | -11 | -2 |
| **JUNE** | | | | | | | | | | | | | | | | | |
| 18 | 17 | 27 | 27 | 23 | 20 | 19 | 15 | 3 | - | 2 | -2 | 1 | 3 | 2 | 0 | -1 | -1 |
| 20 | 21 | 34 | 35 | 27 | 19 | 14 | 9 | -1 | - | -1 | -5 | -4 | -2 | -1 | -2 | -3 | -2 |
| 22 | 26 | 42 | 44 | 34 | 21 | 11 | 4 | -2 | - | -5 | -8 | -7 | -4 | -3 | -4 | -4 | -3 |
| 24 | 30 | 50 | 53 | 42 | 24 | 9 | 1 | -3 | - | -10 | -10 | -9 | -6 | -5 | -5 | -5 | -4 |
| 26 | 34 | 56 | 61 | 50 | 30 | 11 | 0 | -2 | - | -13 | -12 | -10 | -7 | -6 | -6 | -6 | -4 |
| 28 | 36 | 61 | 68 | 58 | 37 | 15 | 1 | -1 | - | -16 | -12 | -11 | -8 | -7 | -7 | -7 | -5 |
| 30 | 38 | 64 | 73 | 65 | 45 | 22 | 5 | 0 | - | -17 | -13 | -11 | -9 | -8 | -8 | -8 | -5 |
| 32 | 39 | 67 | 77 | 71 | 53 | 31 | 12 | 2 | - | -18 | -14 | -12 | -11 | -10 | -10 | -9 | -5 |
| 34 | 39 | 68 | 79 | 76 | 62 | 42 | 20 | 3 | - | -18 | -15 | -13 | -12 | -12 | -11 | -9 | -5 |
| 36 | 40 | 68 | 80 | 80 | 71 | 54 | 30 | 5 | - | -18 | -17 | -15 | -14 | -14 | -13 | -9 | -5 |
| 38 | 40 | 68 | 81 | 83 | 79 | 66 | 40 | 6 | - | -18 | -19 | -16 | -16 | -17 | -15 | -10 | -4 |
| 40 | 40 | 67 | 81 | 87 | 88 | 78 | 50 | 6 | - | -19 | -22 | -19 | -18 | -20 | -17 | -10 | -3 |
| 42 | 40 | 67 | 81 | 89 | 96 | 89 | 59 | 6 | - | -21 | -26 | -21 | -20 | -22 | -19 | -10 | -3 |
| 44 | 40 | 67 | 81 | 92 | 103 | 100 | 66 | 5 | - | -23 | -29 | -23 | -23 | -25 | -21 | -10 | -2 |
| 46 | 40 | 66 | 80 | 94 | 109 | 108 | 73 | 4 | - | -26 | -32 | -26 | -25 | -27 | -23 | -11 | -2 |
| 48 | 41 | 66 | 80 | 95 | 113 | 115 | 78 | 2 | - | -29 | -36 | -28 | -27 | -30 | -25 | -12 | -2 |
| 50 | 41 | 66 | 79 | 95 | 117 | 120 | 81 | 0 | - | -32 | -39 | -29 | -28 | -32 | -27 | -13 | -2 |
| 52 | 41 | 65 | 77 | 95 | 118 | 124 | 84 | -1 | - | -35 | -41 | -31 | -30 | -34 | -29 | -14 | -2 |
| 54 | 41 | 64 | 75 | 93 | 118 | 126 | 86 | -3 | - | -36 | -43 | -32 | -31 | -36 | -31 | -15 | -3 |
| 56 | 41 | 63 | 72 | 89 | 117 | 127 | 87 | -4 | - | -37 | -45 | -33 | -32 | -37 | -33 | -17 | -3 |
| 58 | 41 | 62 | 69 | 85 | 115 | 127 | 88 | -4 | - | -38 | -46 | -34 | -33 | -39 | -35 | -18 | -4 |
| 60 | 41 | 61 | 65 | 81 | 111 | 125 | 87 | -5 | - | -38 | -46 | -35 | -34 | -41 | -37 | -20 | -5 |
| 62 | 42 | 60 | 62 | 76 | 107 | 122 | 85 | -6 | - | -39 | -47 | -35 | -35 | -43 | -39 | -21 | -6 |
| 64 | 42 | 59 | 59 | 71 | 102 | 117 | 81 | -7 | - | -41 | -47 | -35 | -36 | -45 | -41 | -23 | -6 |
| 66 | 42 | 58 | 56 | 67 | 96 | 110 | 75 | -9 | - | -43 | -46 | -35 | -37 | -46 | -43 | -24 | -7 |
| 68 | 41 | 57 | 54 | 62 | 89 | 101 | 67 | -12 | - | -47 | -46 | -34 | -37 | -47 | -44 | -25 | -8 |
| 70 | 41 | 56 | 52 | 58 | 82 | 91 | 57 | -15 | - | -52 | -45 | -32 | -37 | -48 | -45 | -26 | -8 |
| 72 | 40 | 55 | 50 | 54 | 74 | 80 | 47 | -18 | - | -58 | -44 | -30 | -36 | -48 | -46 | -27 | -8 |
| 74 | 40 | 53 | 48 | 50 | 65 | 69 | 37 | -20 | - | -64 | -42 | -27 | -34 | -48 | -46 | -27 | -8 |
| 76 | 39 | 52 | 44 | 44 | 57 | 59 | 29 | -21 | - | -69 | -39 | -22 | -31 | -46 | -45 | -26 | -8 |
| 78 | 38 | 49 | 40 | 39 | 50 | 51 | 23 | -21 | - | -72 | -34 | -15 | -26 | -43 | -43 | -25 | -8 |
| 80 | 36 | 46 | 37 | 34 | 44 | 45 | 19 | -18 | - | -72 | -27 | -7 | -19 | -38 | -39 | -23 | -7 |

64

ZONAL MEAN GEOSTROPHIC W-E WIND (M/S)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | 0 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JULY |
| 18 | 16 | 28 | 34 | 32 | 26 | 20 | 15 | 6 | - | 6 | -4 | -5 | -1 | 2 | 2 | -1 | -2 |
| 20 | 21 | 37 | 44 | 39 | 26 | 14 | 8 | 4 | - | 3 | -7 | -9 | -6 | -1 | -1 | -2 | -3 |
| 22 | 26 | 47 | 56 | 49 | 29 | 10 | 3 | 4 | - | -2 | -9 | -12 | -8 | -3 | -2 | -4 | -4 |
| 24 | 31 | 56 | 68 | 59 | 33 | 8 | -2 | 4 | - | -6 | -11 | -14 | -11 | -5 | -3 | -5 | -5 |
| 26 | 35 | 64 | 77 | 69 | 40 | 8 | -5 | 3 | - | -10 | -12 | -16 | -12 | -6 | -5 | -6 | -6 |
| 28 | 37 | 68 | 85 | 78 | 47 | 11 | -6 | 2 | - | -12 | -13 | -17 | -14 | -8 | -6 | -7 | -6 |
| 30 | 38 | 72 | 90 | 85 | 54 | 16 | -5 | 1 | - | 14 | -14 | -18 | -16 | -10 | -7 | -8 | -7 |
| 32 | 38 | 73 | 94 | 90 | 61 | 23 | -1 | 0 | - | -14 | -16 | -20 | -18 | -12 | -9 | -9 | -7 |
| 34 | 39 | 74 | 96 | 93 | 67 | 31 | 5 | 0 | - | -15 | -17 | -21 | -20 | -14 | -10 | -9 | -6 |
| 36 | 39 | 75 | 97 | 96 | 72 | 39 | 11 | 0 | - | -15 | -19 | -23 | -22 | -17 | -12 | -9 | -6 |
| 38 | 40 | 76 | 97 | 97 | 77 | 47 | 19 | 1 | - | -15 | -21 | -26 | -25 | -20 | -14 | -9 | -5 |
| 40 | 42 | 77 | 98 | 98 | 81 | 55 | 26 | 1 | - | -15 | -24 | -28 | -28 | -23 | -16 | -9 | -4 |
| 42 | 43 | 78 | 98 | 99 | 85 | 62 | 32 | 1 | - | -15 | -26 | -30 | -31 | -26 | -19 | -10 | -3 |
| 44 | 45 | 80 | 98 | 99 | 89 | 68 | 37 | 0 | - | -15 | -28 | -33 | -33 | -29 | -21 | -10 | -3 |
| 46 | 46 | 81 | 97 | 100 | 92 | 73 | 42 | -2 | - | -15 | -30 | -35 | -36 | -32 | -23 | -11 | -3 |
| 48 | 47 | 81 | 97 | 100 | 95 | 78 | 45 | -4 | - | -15 | -32 | -37 | -38 | -35 | -25 | -12 | -3 |
| 50 | 47 | 80 | 95 | 99 | 96 | 81 | 48 | -5 | - | -15 | -33 | -38 | -40 | -37 | -27 | -13 | -3 |
| 52 | 47 | 79 | 93 | 98 | 97 | 84 | 50 | -7 | - | -15 | -34 | -39 | -41 | -39 | -29 | -15 | -4 |
| 54 | 46 | 76 | 89 | 95 | 97 | 86 | 53 | -7 | - | -14 | -34 | -39 | -42 | -42 | -32 | -16 | -5 |
| 56 | 45 | 73 | 85 | 91 | 95 | 88 | 55 | -6 | - | -13 | -34 | -39 | -43 | -44 | -34 | -18 | -5 |
| 58 | 43 | 70 | 80 | 86 | 93 | 89 | 58 | -4 | - | -12 | -33 | -38 | -44 | -46 | -37 | -20 | -6 |
| 60 | 42 | 67 | 75 | 80 | 89 | 89 | 61 | 0 | - | -10 | -31 | -37 | -45 | -48 | -40 | -22 | -7 |
| 62 | 41 | 64 | 69 | 74 | 85 | 88 | 63 | 5 | - | -8 | -29 | -36 | -45 | -51 | -43 | -24 | -8 |
| 64 | 40 | 61 | 64 | 69 | 81 | 86 | 64 | 10 | - | -5 | -25 | -34 | -46 | -53 | -45 | -26 | -9 |
| 66 | 39 | 58 | 60 | 64 | 76 | 83 | 64 | 14 | - | -3 | -22 | -32 | -46 | -55 | -48 | -28 | -10 |
| 68 | 38 | 56 | 56 | 59 | 71 | 78 | 62 | 17 | - | -1 | -18 | -30 | -46 | -56 | -50 | -30 | -11 |
| 70 | 37 | 54 | 54 | 55 | 66 | 73 | 57 | 19 | - | -1 | -15 | -27 | -45 | -57 | -51 | -31 | -11 |
| 72 | 36 | 52 | 51 | 52 | 61 | 66 | 52 | 18 | - | -3 | -12 | -24 | -43 | -56 | -51 | -32 | -12 |
| 74 | 35 | 50 | 49 | 48 | 55 | 59 | 45 | 16 | - | -6 | -10 | -21 | -40 | -54 | -50 | -32 | -13 |
| 76 | 34 | 49 | 46 | 43 | 49 | 52 | 39 | 12 | - | -12 | -9 | -16 | -35 | -50 | -48 | -32 | -13 |
| 78 | 34 | 48 | 43 | 38 | 43 | 46 | 33 | 9 | - | -18 | -8 | -11 | -28 | -44 | -45 | -31 | -14 |
| 80 | 34 | 47 | 40 | 34 | 38 | 41 | 29 | 7 | - | -24 | -6 | -3 | -19 | -36 | -40 | -30 | -14 |
| AUGUST |
| 18 | 14 | 25 | 29 | 28 | 26 | 22 | 16 | 1 | - | 7 | -3 | -4 | 0 | 4 | 4 | 2 | 0 |
| 20 | 22 | 38 | 43 | 36 | 25 | 16 | 9 | -2 | - | 1 | -8 | -7 | -3 | 1 | 2 | 1 | 0 |
| 22 | 31 | 53 | 58 | 45 | 25 | 10 | 3 | -4 | - | -5 | -11 | -10 | -5 | -1 | 0 | 0 | -1 |
| 24 | 40 | 67 | 72 | 54 | 27 | 7 | -2 | -5 | - | -10 | -14 | -12 | -7 | -2 | 0 | -1 | -1 |
| 26 | 48 | 78 | 83 | 63 | 31 | 5 | -6 | -6 | - | -13 | -15 | -14 | -9 | -3 | -1 | -2 | -2 |
| 28 | 53 | 86 | 91 | 69 | 34 | 5 | -8 | -7 | - | -15 | -15 | -15 | -10 | -4 | -2 | -2 | -2 |
| 30 | 56 | 91 | 96 | 73 | 38 | 7 | -8 | -8 | - | -15 | -16 | -16 | -11 | -6 | -3 | -2 | -2 |
| 32 | 58 | 94 | 98 | 75 | 41 | 11 | -5 | -9 | - | -15 | -16 | -16 | -13 | -7 | -4 | -2 | -1 |
| 34 | 59 | 96 | 99 | 76 | 43 | 16 | -1 | -9 | - | -14 | -17 | -17 | -14 | -9 | -5 | -2 | 0 |
| 36 | 61 | 97 | 98 | 75 | 45 | 21 | 4 | -9 | - | -13 | -18 | -18 | -16 | -11 | -6 | -1 | 0 |
| 38 | 62 | 98 | 97 | 73 | 46 | 26 | 10 | -8 | - | -11 | -19 | -19 | -17 | -13 | -7 | -1 | 1 |
| 40 | 65 | 100 | 96 | 70 | 47 | 32 | 17 | -7 | - | -9 | -19 | -20 | -19 | -15 | -8 | -1 | 2 |
| 42 | 67 | 102 | 94 | 68 | 48 | 38 | 24 | -6 | - | -5 | -19 | -21 | -21 | -17 | -10 | 0 | 3 |
| 44 | 70 | 103 | 93 | 66 | 49 | 43 | 31 | -4 | - | -1 | -19 | -22 | -22 | -19 | -11 | 0 | 4 |
| 46 | 71 | 103 | 91 | 64 | 50 | 49 | 38 | -2 | - | 4 | -18 | -22 | -24 | -21 | -12 | 0 | 4 |
| 48 | 72 | 102 | 88 | 62 | 52 | 54 | 44 | -1 | - | 10 | -17 | -23 | -25 | -23 | -13 | 0 | 5 |
| 50 | 71 | 99 | 84 | 60 | 54 | 59 | 49 | 1 | - | 15 | -15 | -23 | -26 | -24 | -14 | -1 | 5 |
| 52 | 69 | 95 | 80 | 58 | 55 | 64 | 54 | 2 | - | 20 | -13 | -22 | -26 | -26 | -16 | -2 | 4 |
| 54 | 66 | 90 | 75 | 56 | 57 | 68 | 59 | 4 | - | 23 | -12 | -21 | -27 | -27 | -17 | -3 | 4 |
| 56 | 62 | 84 | 69 | 53 | 58 | 71 | 63 | 6 | - | 25 | -10 | -20 | -27 | -29 | -20 | -5 | 3 |
| 58 | 59 | 79 | 64 | 50 | 58 | 75 | 67 | 9 | - | 26 | -8 | -18 | -26 | -30 | -22 | -7 | 2 |
| 60 | 55 | 73 | 58 | 46 | 58 | 77 | 70 | 13 | - | 24 | -7 | -16 | -26 | -32 | -25 | -9 | 1 |
| 62 | 52 | 68 | 53 | 43 | 57 | 78 | 72 | 18 | - | 22 | -5 | -13 | -25 | -33 | -28 | -12 | 0 |
| 64 | 50 | 64 | 49 | 39 | 56 | 79 | 74 | 22 | - | 19 | -3 | -10 | -24 | -35 | -31 | -15 | -2 |
| 66 | 47 | 60 | 45 | 37 | 55 | 79 | 74 | 27 | - | 15 | 0 | -7 | -23 | -36 | -34 | -17 | -3 |
| 68 | 45 | 57 | 42 | 35 | 53 | 77 | 72 | 30 | - | 10 | 2 | -4 | -21 | -37 | -36 | -20 | -5 |
| 70 | 43 | 55 | 40 | 34 | 51 | 74 | 69 | 31 | - | 5 | 3 | 0 | -19 | -37 | -38 | -22 | -6 |
| 72 | 42 | 53 | 39 | 32 | 49 | 70 | 64 | 29 | - | -1 | 4 | 3 | -16 | -36 | -38 | -23 | -7 |
| 74 | 41 | 52 | 37 | 30 | 46 | 65 | 58 | 25 | - | -8 | 4 | 6 | -13 | -34 | -38 | -24 | -8 |
| 76 | 41 | 51 | 36 | 27 | 42 | 59 | 51 | 17 | - | -17 | 1 | 8 | -8 | -30 | -36 | -24 | -9 |
| 78 | 42 | 52 | 34 | 23 | 37 | 54 | 44 | 8 | - | -25 | -2 | 11 | -3 | -26 | -34 | -24 | -10 |
| 80 | 44 | 52 | 31 | 19 | 32 | 50 | 39 | 1 | - | -34 | -4 | 15 | 4 | -19 | -30 | -24 | -11 |

65

ZONAL MEAN GEOSTROPHIC W-E WIND (M/S)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SEPTEMBER** | | | | | | | | | | | | | | | | | |
| 18 | 9 | 23 | 36 | 40 | 31 | 16 | 5 | -1 | - | 5 | 1 | 1 | 6 | 10 | 9 | 5 | 1 |
| 20 | 19 | 37 | 47 | 43 | 27 | 10 | 0 | -5 | - | 0 | -4 | -3 | 3 | 8 | 8 | 5 | 1 |
| 22 | 29 | 52 | 59 | 46 | 24 | 5 | -4 | -7 | - | -4 | -8 | -6 | 1 | 6 | 7 | 5 | 2 |
| 24 | 38 | 64 | 68 | 49 | 22 | 2 | -6 | -8 | - | -7 | -9 | -7 | -1 | 5 | 7 | 5 | 2 |
| 26 | 45 | 73 | 74 | 52 | 22 | 0 | -8 | -7 | - | -8 | -9 | -7 | -1 | 4 | 7 | 5 | 2 |
| 28 | 50 | 79 | 77 | 54 | 23 | 1 | -8 | -6 | - | -8 | -8 | -6 | -1 | 4 | 7 | 6 | 3 |
| 30 | 52 | 80 | 78 | 54 | 25 | 3 | -6 | -6 | - | -7 | -7 | -5 | -1 | 4 | 8 | 7 | 4 |
| 32 | 52 | 79 | 76 | 53 | 26 | 7 | -3 | -6 | - | -6 | -6 | -4 | 0 | 5 | 8 | 9 | 6 |
| 34 | 51 | 77 | 73 | 51 | 28 | 11 | 2 | -5 | - | -3 | -5 | -3 | 0 | 5 | 9 | 11 | 8 |
| 36 | 49 | 74 | 69 | 48 | 29 | 17 | 7 | -5 | - | 0 | -3 | -2 | 1 | 5 | 11 | 13 | 10 |
| 38 | 48 | 71 | 64 | 45 | 31 | 23 | 13 | -4 | - | 3 | -2 | 0 | 2 | 6 | 12 | 16 | 12 |
| 40 | 48 | 69 | 60 | 43 | 32 | 28 | 20 | -2 | - | 8 | 0 | 1 | 3 | 7 | 14 | 19 | 14 |
| 42 | 47 | 66 | 57 | 40 | 34 | 34 | 27 | 0 | - | 13 | 2 | 2 | 4 | 8 | 16 | 22 | 16 |
| 44 | 46 | 64 | 54 | 38 | 35 | 39 | 34 | 3 | - | 19 | 5 | 3 | 4 | 9 | 18 | 25 | 18 |
| 46 | 44 | 61 | 51 | 37 | 37 | 44 | 40 | 7 | - | 26 | 8 | 5 | 5 | 10 | 20 | 27 | 20 |
| 48 | 42 | 57 | 48 | 37 | 39 | 49 | 45 | 11 | - | 32 | 10 | 6 | 5 | 10 | 22 | 29 | 22 |
| 50 | 39 | 53 | 45 | 36 | 42 | 53 | 49 | 14 | - | 37 | 13 | 7 | 6 | 11 | 23 | 30 | 23 |
| 52 | 35 | 48 | 41 | 36 | 44 | 56 | 53 | 17 | - | 41 | 15 | 7 | 6 | 12 | 23 | 31 | 23 |
| 54 | 31 | 42 | 38 | 36 | 46 | 59 | 55 | 18 | - | 43 | 16 | 8 | 7 | 12 | 23 | 30 | 23 |
| 56 | 27 | 37 | 34 | 35 | 48 | 61 | 57 | 19 | - | 44 | 17 | 9 | 8 | 12 | 22 | 29 | 22 |
| 58 | 23 | 32 | 31 | 34 | 49 | 63 | 57 | 19 | - | 42 | 17 | 11 | 9 | 12 | 21 | 27 | 20 |
| 60 | 20 | 28 | 28 | 33 | 50 | 64 | 57 | 19 | - | 38 | 17 | 12 | 10 | 12 | 19 | 25 | 19 |
| 62 | 18 | 24 | 25 | 32 | 50 | 64 | 56 | 18 | - | 33 | 17 | 15 | 12 | 12 | 17 | 22 | 17 |
| 64 | 16 | 22 | 22 | 31 | 50 | 64 | 54 | 17 | - | 26 | 17 | 17 | 14 | 11 | 14 | 19 | 15 |
| 66 | 15 | 20 | 20 | 30 | 49 | 62 | 51 | 16 | - | 17 | 17 | 20 | 16 | 10 | 12 | 16 | 13 |
| 68 | 14 | 18 | 19 | 29 | 48 | 59 | 47 | 14 | - | 8 | 17 | 23 | 18 | 10 | 9 | 14 | 12 |
| 70 | 13 | 18 | 19 | 28 | 46 | 56 | 41 | 11 | - | -1 | 16 | 27 | 20 | 9 | 7 | 11 | 11 |
| 72 | 13 | 18 | 18 | 27 | 44 | 51 | 34 | 7 | - | -11 | 15 | 29 | 22 | 8 | 5 | 10 | 10 |
| 74 | 14 | 18 | 17 | 25 | 41 | 46 | 27 | 0 | - | -21 | 13 | 31 | 23 | 8 | 3 | 9 | 10 |
| 76 | 15 | 19 | 16 | 22 | 37 | 41 | 20 | -8 | - | -30 | 10 | 31 | 24 | 7 | 2 | 8 | 10 |
| 78 | 17 | 20 | 15 | 18 | 33 | 37 | 14 | -16 | - | -39 | 7 | 31 | 24 | 7 | 1 | 8 | 10 |
| 80 | 19 | 21 | 13 | 15 | 29 | 34 | 11 | -22 | - | -45 | 4 | 31 | 25 | 7 | 1 | 8 | 10 |
| **OCTOBER** | | | | | | | | | | | | | | | | | |
| 18 | 11 | 22 | 28 | 27 | 19 | 9 | 1 | -2 | - | -3 | 3 | 9 | 13 | 15 | 14 | 10 | 5 |
| 20 | 17 | 30 | 33 | 26 | 14 | 3 | -4 | -7 | - | -7 | -1 | 5 | 10 | 13 | 13 | 10 | 6 |
| 22 | 24 | 39 | 39 | 26 | 11 | 0 | -7 | -10 | - | -9 | -4 | 3 | 8 | 12 | 13 | 11 | 7 |
| 24 | 30 | 47 | 43 | 26 | 9 | -2 | -9 | -13 | - | -11 | -5 | 2 | 8 | 11 | 13 | 13 | 8 |
| 26 | 35 | 52 | 45 | 26 | 9 | -2 | -9 | -15 | - | -12 | -4 | 4 | 9 | 12 | 15 | 15 | 10 |
| 28 | 38 | 54 | 45 | 25 | 9 | 0 | -7 | -16 | - | -12 | -3 | 7 | 11 | 13 | 16 | 17 | 12 |
| 30 | 38 | 53 | 43 | 24 | 11 | 3 | -5 | -16 | - | -12 | 0 | 10 | 14 | 15 | 19 | 20 | 14 |
| 32 | 38 | 51 | 40 | 22 | 12 | 7 | -1 | -14 | - | -9 | 4 | 15 | 17 | 18 | 22 | 24 | 17 |
| 34 | 36 | 47 | 36 | 20 | 13 | 11 | 3 | -12 | - | -5 | 9 | 19 | 21 | 21 | 25 | 28 | 20 |
| 36 | 33 | 43 | 31 | 18 | 14 | 15 | 7 | -9 | - | 0 | 14 | 24 | 24 | 24 | 29 | 33 | 23 |
| 38 | 31 | 38 | 27 | 15 | 15 | 18 | 12 | -6 | - | 6 | 19 | 28 | 28 | 28 | 34 | 38 | 26 |
| 40 | 28 | 34 | 23 | 13 | 16 | 22 | 16 | -3 | - | 13 | 24 | 32 | 31 | 31 | 39 | 43 | 30 |
| 42 | 25 | 30 | 19 | 12 | 17 | 25 | 20 | 1 | - | 20 | 29 | 36 | 34 | 35 | 44 | 48 | 33 |
| 44 | 22 | 26 | 16 | 10 | 17 | 27 | 23 | 4 | - | 27 | 34 | 39 | 37 | 39 | 48 | 52 | 36 |
| 46 | 20 | 23 | 14 | 10 | 18 | 28 | 26 | 7 | - | 33 | 38 | 42 | 40 | 43 | 52 | 56 | 38 |
| 48 | 17 | 20 | 12 | 9 | 19 | 30 | 28 | 9 | - | 38 | 41 | 44 | 43 | 46 | 55 | 59 | 40 |
| 50 | 15 | 17 | 10 | 9 | 19 | 30 | 29 | 12 | - | 41 | 43 | 46 | 45 | 48 | 57 | 60 | 40 |
| 52 | 12 | 14 | 9 | 9 | 20 | 31 | 30 | 13 | - | 43 | 45 | 48 | 47 | 50 | 59 | 60 | 40 |
| 54 | 10 | 11 | 8 | 9 | 20 | 31 | 30 | 14 | - | 43 | 45 | 49 | 49 | 52 | 59 | 59 | 39 |
| 56 | 8 | 9 | 6 | 9 | 20 | 31 | 30 | 14 | - | 42 | 45 | 49 | 50 | 53 | 58 | 56 | 37 |
| 58 | 6 | 7 | 5 | 9 | 21 | 31 | 28 | 13 | - | 39 | 44 | 50 | 51 | 53 | 56 | 53 | 35 |
| 60 | 5 | 5 | 3 | 8 | 21 | 30 | 26 | 10 | - | 34 | 42 | 51 | 52 | 52 | 53 | 50 | 32 |
| 62 | 4 | 4 | 2 | 8 | 21 | 29 | 23 | 5 | - | 28 | 40 | 51 | 53 | 51 | 50 | 46 | 30 |
| 64 | 4 | 2 | 1 | 7 | 20 | 28 | 19 | -2 | - | 21 | 37 | 52 | 54 | 50 | 47 | 42 | 27 |
| 66 | 4 | 2 | 0 | 6 | 20 | 26 | 14 | -11 | - | 11 | 34 | 53 | 55 | 48 | 43 | 39 | 25 |
| 68 | 4 | 1 | -1 | 5 | 19 | 24 | 8 | -21 | - | 1 | 31 | 53 | 55 | 46 | 39 | 35 | 23 |
| 70 | 4 | 1 | -2 | 4 | 19 | 22 | 1 | -31 | - | -10 | 27 | 53 | 55 | 43 | 35 | 32 | 22 |
| 72 | 5 | 1 | -3 | 3 | 17 | 18 | -6 | -41 | - | -21 | 22 | 53 | 54 | 40 | 31 | 29 | 20 |
| 74 | 5 | 2 | -4 | 1 | 15 | 15 | -12 | -49 | - | -30 | 18 | 51 | 52 | 37 | 28 | 27 | 20 |
| 76 | 6 | 2 | -5 | -1 | 12 | 12 | -16 | -53 | - | -38 | 15 | 49 | 50 | 34 | 24 | 24 | 19 |
| 78 | 7 | 3 | -5 | -3 | 10 | 10 | -17 | -53 | - | -42 | 13 | 47 | 47 | 30 | 21 | 22 | 18 |
| 80 | 8 | 4 | -6 | -4 | 8 | 10 | -15 | -49 | - | -42 | 13 | 45 | 44 | 26 | 18 | 20 | 17 |

66

ZONAL MEAN GEOSTROPHIC W-E WIND (M/S)

| KM LAT = | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **NOVEMBER** | | | | | | | | | | | | | | | | | |
| 18 | 12 | 19 | 20 | 17 | 12 | 5 | -5 | -14 | - | -3 | 7 | 16 | 18 | 16 | 14 | 12 | 7 |
| 20 | 12 | 18 | 17 | 12 | 7 | 0 | -7 | -14 | - | -6 | 3 | 11 | 15 | 15 | 15 | 13 | 8 |
| 22 | 12 | 17 | 15 | 9 | 3 | -3 | -9 | -15 | - | -6 | 1 | 8 | 13 | 16 | 17 | 15 | 9 |
| 24 | 11 | 16 | 12 | 6 | 0 | -4 | -9 | -16 | - | -6 | 0 | 8 | 13 | 17 | 19 | 18 | 11 |
| 26 | 11 | 14 | 9 | 2 | -1 | -4 | -9 | -17 | - | -5 | 1 | 10 | 15 | 19 | 22 | 22 | 14 |
| 28 | 11 | 12 | 6 | -1 | -3 | -3 | -7 | -17 | - | -4 | 4 | 13 | 19 | 22 | 26 | 25 | 16 |
| 30 | 10 | 10 | 2 | -4 | -4 | -2 | -6 | -16 | - | -2 | 9 | 19 | 23 | 26 | 29 | 29 | 19 |
| 32 | 10 | 9 | -1 | -7 | -5 | -1 | -5 | -15 | - | 1 | 15 | 25 | 29 | 30 | 33 | 33 | 21 |
| 34 | 9 | 7 | -4 | -10 | -6 | -1 | -4 | -13 | - | 4 | 21 | 33 | 35 | 35 | 37 | 37 | 24 |
| 36 | 8 | 5 | -6 | -12 | -8 | -1 | -3 | -11 | - | 9 | 29 | 41 | 42 | 40 | 41 | 40 | 26 |
| 38 | 8 | 4 | -8 | -14 | -9 | -2 | -3 | -10 | - | 14 | 36 | 48 | 48 | 45 | 45 | 43 | 28 |
| 40 | 7 | 3 | -10 | -16 | -11 | -4 | -4 | -10 | - | 18 | 42 | 56 | 55 | 50 | 49 | 46 | 30 |
| 42 | 6 | 1 | -11 | -18 | -13 | -5 | -6 | -11 | - | 22 | 48 | 63 | 61 | 55 | 53 | 49 | 31 |
| 44 | 6 | 1 | -12 | -19 | -14 | -8 | -8 | -13 | - | 25 | 53 | 68 | 67 | 60 | 56 | 51 | 32 |
| 46 | 5 | 0 | -13 | -20 | -16 | -10 | -11 | -16 | - | 27 | 57 | 73 | 72 | 63 | 58 | 52 | 33 |
| 48 | 4 | -1 | -14 | -21 | -17 | -12 | -14 | -19 | - | 27 | 60 | 78 | 76 | 66 | 60 | 52 | 33 |
| 50 | 4 | -3 | -15 | -21 | -18 | -14 | -17 | -22 | - | 28 | 62 | 81 | 79 | 68 | 60 | 52 | 33 |
| 52 | 3 | -4 | -16 | -22 | -19 | -15 | -19 | -24 | - | 27 | 63 | 83 | 81 | 69 | 60 | 51 | 32 |
| 54 | 2 | -5 | -17 | -22 | -19 | -17 | -21 | -26 | - | 27 | 65 | 85 | 82 | 68 | 58 | 50 | 31 |
| 56 | 0 | -7 | -18 | -23 | -20 | -18 | -23 | -28 | - | 26 | 66 | 86 | 82 | 67 | 57 | 48 | 30 |
| 58 | -1 | -9 | -19 | -23 | -20 | -19 | -25 | -29 | - | 25 | 67 | 87 | 82 | 66 | 54 | 46 | 29 |
| 60 | -2 | -11 | -21 | -24 | -20 | -19 | -27 | -31 | - | 24 | 67 | 88 | 81 | 64 | 52 | 44 | 28 |
| 62 | -3 | -12 | -22 | -24 | -20 | -20 | -28 | -34 | - | 22 | 67 | 88 | 80 | 61 | 49 | 42 | 27 |
| 64 | -4 | -14 | -23 | -25 | -19 | -20 | -30 | -38 | - | 19 | 65 | 87 | 78 | 59 | 47 | 41 | 27 |
| 66 | -5 | -15 | -25 | -25 | -19 | -19 | -33 | -44 | - | 14 | 62 | 85 | 76 | 56 | 44 | 40 | 26 |
| 68 | -5 | -16 | -26 | -26 | -18 | -19 | -36 | -52 | - | 8 | 58 | 82 | 74 | 53 | 42 | 39 | 27 |
| 70 | -6 | -17 | -27 | -26 | -17 | -18 | -38 | -60 | - | 2 | 52 | 79 | 71 | 50 | 39 | 38 | 27 |
| 72 | -5 | -17 | -28 | -26 | -16 | -17 | -40 | -67 | - | -6 | 45 | 74 | 67 | 44 | 37 | 37 | 27 |
| 74 | -5 | -17 | -29 | -27 | -16 | -16 | -41 | -73 | - | -12 | 39 | 68 | 62 | 42 | 34 | 37 | 28 |
| 76 | -4 | -16 | -29 | -27 | -15 | -15 | -40 | -75 | - | -18 | 33 | 62 | 57 | 38 | 32 | 36 | 28 |
| 78 | -3 | -15 | -27 | -26 | -14 | -12 | -37 | -73 | - | -20 | 29 | 57 | 52 | 34 | 29 | 34 | 27 |
| 80 | -2 | -12 | -25 | -24 | -12 | -8 | -30 | -65 | - | -19 | 28 | 54 | 47 | 29 | 26 | 33 | 27 |
| **DECEMBER** | | | | | | | | | | | | | | | | | |
| 18 | 2 | 5 | 8 | 12 | 12 | 6 | -5 | -15 | - | 0 | 11 | 19 | 20 | 19 | 17 | 15 | 9 |
| 20 | 1 | 3 | 5 | 6 | 6 | 1 | -7 | -14 | - | -1 | 8 | 14 | 17 | 18 | 20 | 19 | 12 |
| 22 | 0 | 1 | 1 | 2 | 1 | -3 | -9 | -15 | - | 0 | 6 | 11 | 15 | 19 | 24 | 24 | 15 |
| 24 | 0 | -1 | -2 | -2 | -3 | -5 | -10 | -16 | - | 2 | 5 | 9 | 14 | 21 | 29 | 30 | 19 |
| 26 | -1 | -3 | -5 | -6 | -6 | -7 | -12 | -18 | - | 4 | 5 | 9 | 14 | 24 | 35 | 36 | 23 |
| 28 | -2 | -5 | -8 | -9 | -9 | -9 | -13 | -20 | - | 5 | 7 | 10 | 17 | 28 | 40 | 42 | 27 |
| 30 | -2 | -6 | -10 | -12 | -11 | -12 | -15 | -21 | - | 6 | 9 | 13 | 21 | 32 | 44 | 46 | 30 |
| 32 | -3 | -8 | -13 | -15 | -14 | -14 | -17 | -23 | - | 6 | 12 | 18 | 26 | 37 | 49 | 50 | 32 |
| 34 | -3 | -9 | -15 | -17 | -17 | -16 | -19 | -25 | - | 5 | 15 | 24 | 33 | 43 | 53 | 53 | 34 |
| 36 | -3 | -9 | -16 | -20 | -19 | -19 | -22 | -27 | - | 4 | 18 | 31 | 41 | 49 | 57 | 54 | 35 |
| 38 | -3 | -10 | -18 | -22 | -22 | -22 | -26 | -31 | - | 2 | 21 | 39 | 49 | 56 | 60 | 56 | 35 |
| 40 | -4 | -11 | -19 | -24 | -25 | -26 | -30 | -35 | - | -1 | 24 | 46 | 57 | 63 | 63 | 56 | 35 |
| 42 | -4 | -11 | -21 | -26 | -27 | -29 | -35 | -41 | - | -4 | 26 | 52 | 66 | 69 | 67 | 57 | 34 |
| 44 | -4 | -12 | -22 | -28 | -30 | -32 | -39 | -47 | - | -8 | 27 | 58 | 73 | 75 | 69 | 57 | 33 |
| 46 | -4 | -13 | -24 | -30 | -32 | -35 | -44 | -53 | - | -12 | 28 | 63 | 80 | 80 | 72 | 57 | 32 |
| 48 | -4 | -14 | -25 | -32 | -34 | -38 | -48 | -59 | - | -15 | 29 | 67 | 85 | 84 | 73 | 57 | 32 |
| 50 | -5 | -15 | -27 | -34 | -35 | -40 | -52 | -64 | - | -18 | 31 | 71 | 89 | 86 | 74 | 56 | 31 |
| 52 | -5 | -16 | -29 | -35 | -37 | -42 | -55 | -68 | - | -19 | 33 | 75 | 91 | 87 | 73 | 55 | 31 |
| 54 | -6 | -17 | -30 | -37 | -38 | -43 | -57 | -70 | - | -18 | 37 | 79 | 93 | 86 | 72 | 54 | 30 |
| 56 | -7 | -19 | -32 | -38 | -38 | -43 | -58 | -70 | - | -17 | 42 | 83 | 93 | 84 | 69 | 52 | 30 |
| 58 | -8 | -21 | -34 | -40 | -39 | -43 | -58 | -69 | - | -14 | 48 | 87 | 93 | 80 | 65 | 50 | 29 |
| 60 | -8 | -22 | -36 | -41 | -39 | -43 | -58 | -66 | - | -10 | 54 | 91 | 93 | 76 | 61 | 48 | 29 |
| 62 | -9 | -24 | -38 | -42 | -39 | -42 | -56 | -62 | - | -6 | 60 | 94 | 92 | 72 | 56 | 46 | 28 |
| 64 | -10 | -25 | -40 | -44 | -39 | -41 | -54 | -58 | - | -3 | 64 | 97 | 90 | 68 | 52 | 44 | 28 |
| 66 | -10 | -26 | -41 | -45 | -39 | -40 | -51 | -54 | - | -1 | 67 | 98 | 88 | 64 | 48 | 42 | 28 |
| 68 | -11 | -27 | -43 | -45 | -39 | -38 | -49 | -51 | - | -1 | 67 | 96 | 85 | 60 | 45 | 40 | 28 |
| 70 | -11 | -28 | -44 | -46 | -38 | -35 | -46 | -49 | - | -1 | 64 | 93 | 82 | 56 | 42 | 39 | 28 |
| 72 | -11 | -28 | -44 | -46 | -36 | -33 | -43 | -48 | - | -3 | 60 | 88 | 77 | 52 | 39 | 38 | 28 |
| 74 | -11 | -28 | -44 | -45 | -34 | -29 | -40 | -48 | - | -5 | 54 | 81 | 71 | 47 | 37 | 37 | 27 |
| 76 | -10 | -27 | -42 | -43 | -32 | -25 | -36 | -49 | - | -6 | 47 | 74 | 65 | 43 | 34 | 36 | 27 |
| 78 | -9 | -25 | -40 | -40 | -27 | -19 | -31 | -48 | - | -6 | 42 | 66 | 58 | 38 | 31 | 34 | 26 |
| 80 | -9 | -23 | -36 | -35 | -21 | -12 | -23 | -44 | - | -4 | 39 | 61 | 53 | 34 | 28 | 32 | 25 |

67

|     | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 DEG |

**APRIL**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 |
| 20 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 |
| 24 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 28 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -1 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 |
| 32 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | -1 | -3 | -4 | -3 | -2 | 0 | 0 | -1 | -3 | -4 | -3 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 |
| 36 | -2 | -3 | -3 | -3 | -1 | -1 | 0 | -3 | -4 | -4 | -3 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 40 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -4 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| 44 | -2 | -2 | -2 | -1 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 48 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 52 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 |
| 56 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 60 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 |
| 64 | -2 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 |
| 68 | -1 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 2 | 1 | 1 | 2 | 1 | 0 | 0 |
| 72 | -1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 |
| 76 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 |
| 80 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -1 |

**MAY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | 2 | 3 | 3 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 |
| 20 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -2 | -3 | -2 | -2 | 0 | 0 |
| 24 | 2 | 3 | 3 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | -3 | -4 | -3 | -2 | 0 | 1 |
| 28 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -2 | -3 | -3 | -3 | -2 | -1 | 0 | -2 | -3 | -4 | -3 | -1 | 0 | 1 |
| 32 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -3 | -2 | -2 | -2 | -2 | -1 | -2 | -3 | -3 | -3 | -2 | -1 | 0 | -2 | -2 | -2 | -2 | 0 | 1 | 1 |
| 36 | -2 | -3 | -3 | -2 | -2 | -2 | -1 | -2 | -3 | -3 | -2 | -2 | -2 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -1 | 0 | 0 | 1 | 1 | 1 |
| 40 | -1 | -3 | -4 | -3 | -2 | -2 | -1 | -2 | -3 | -3 | -3 | -2 | -1 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 2 | 1 | 0 |
| 44 | -1 | -2 | -3 | -3 | -2 | -1 | -1 | -2 | -2 | -3 | -2 | -1 | -1 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 48 | -1 | -2 | -3 | -3 | -2 | -1 | -1 | -2 | -2 | -3 | -2 | -1 | -1 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 |
| 52 | -1 | -3 | -3 | -2 | -1 | -1 | 0 | -2 | -3 | -3 | -1 | -1 | -1 | 0 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 |
| 56 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | 1 | 2 | 1 | 1 | 0 |
| 60 | -1 | -2 | -2 | -1 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | 0 | 1 | 2 | 2 | 1 | 0 |
| 64 | 0 | -1 | -1 | 0 | 0 | 2 | 1 | 0 | -1 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 |
| 68 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 0 |
| 72 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 |
| 76 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 1 | 1 | 0 | -1 | 2 | 2 | 1 | 1 | 0 | 0 | -1 |
| 80 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 1 | -1 | -1 | 2 | 2 | 1 | 0 | 0 | 0 | -1 |

**JUNE**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 |
| 20 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 |
| 24 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | 1 |
| 28 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -1 | -1 | -1 | 0 | 0 |
| 32 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 |
| 36 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 40 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 1 | 1 | 0 | -1 | -2 | -2 | -1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 |
| 44 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -2 | -2 | -3 | -1 | 1 | 1 | 0 | -1 | -2 | -2 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 |
| 48 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -1 | 1 | 1 | 0 | -1 | -2 | -2 | 0 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 |
| 52 | -2 | -4 | -4 | -2 | -1 | 1 | 1 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | -1 | -2 | -1 | 0 | 2 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | |
| 56 | -2 | -3 | -3 | -2 | 0 | 2 | 2 | -2 | -3 | -2 | -1 | 1 | 3 | 2 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 0 | -1 |
| 60 | -2 | -3 | -2 | -1 | 1 | 4 | 3 | -1 | -2 | -1 | 0 | 2 | 3 | 2 | 0 | -1 | 0 | 1 | 2 | 2 | 0 | 1 | 1 | 2 | 1 | 1 | -1 | -1 |
| 64 | -1 | -2 | -1 | 0 | 2 | 4 | 3 | 0 | -1 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | -1 | -1 |
| 68 | 0 | -1 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | -1 | -1 |
| 72 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | 0 |
| 76 | 1 | 2 | 1 | 1 | 1 | 1 | -1 | 2 | 2 | 2 | 1 | 1 | 0 | -1 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 |
| 80 | 2 | 2 | 2 | 1 | 1 | 0 | -1 | 2 | 3 | 2 | 1 | 0 | -1 | -1 | 1 | 3 | 2 | 1 | -1 | -2 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 1 |

**JULY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | 3 | 4 | 3 | 3 | 2 | 1 | 0 | 3 | 3 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | -1 | -1 | -1 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 |
| 20 | 3 | 4 | 3 | 2 | 2 | 1 | 0 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 |
| 24 | 1 | 1 | 0 | -5 | 0 | 0 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | -1 | -2 | -3 | -3 | -3 | -1 | 0 | -1 | -3 | -3 | -3 | -2 | -1 | 0 |
| 28 | -2 | -3 | -5 | -5 | -3 | -1 | 0 | -3 | -4 | -6 | -7 | -5 | -2 | -1 | -3 | -5 | -5 | -5 | -4 | -2 | 0 | -2 | -4 | -4 | -3 | -2 | 0 | 0 |
| 32 | -2 | -5 | -8 | -9 | -7 | -4 | -2 | -3 | -6 | -8 | -9 | -7 | -4 | -1 | -3 | -5 | -6 | -6 | -4 | -2 | 0 | -2 | -4 | -3 | -2 | 0 | 1 | 0 |
| 36 | -2 | -5 | -8 | -10 | -9 | -5 | -2 | -3 | -5 | -7 | -8 | -7 | -4 | -1 | -3 | -4 | -5 | -4 | -3 | -1 | 0 | -2 | -3 | -2 | 0 | 1 | 1 | 0 |
| 40 | -1 | -4 | -6 | -7 | -6 | -4 | -1 | -2 | -4 | -5 | -5 | -4 | -2 | -1 | -2 | -3 | -3 | -1 | 1 | 1 | 0 | -2 | -2 | -1 | 1 | 2 | 2 | 0 |
| 44 | -1 | -3 | -4 | -4 | -3 | -2 | -1 | -1 | -3 | -4 | -2 | -1 | -1 | 0 | -2 | -3 | -3 | -1 | 1 | 1 | 0 | -2 | -2 | -1 | 1 | 2 | 2 | 0 |
| 48 | -1 | -2 | -4 | -3 | -2 | -1 | 0 | -1 | -3 | -4 | -2 | 0 | 0 | 0 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | -2 | -1 | -1 | 1 | 2 | 1 | 1 |
| 52 | -1 | -2 | -4 | -4 | -2 | 0 | 0 | -2 | -3 | -4 | -3 | -1 | 0 | 0 | -2 | -2 | -3 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 2 | 2 | 1 |
| 56 | -2 | -3 | -3 | -3 | 0 | 0 | 0 | -3 | -3 | -3 | -2 | 0 | 1 | 1 | -2 | -2 | -1 | 0 | 1 | 1 | 1 | -1 | 0 | 2 | 3 | 3 | 2 | 1 |
| 60 | -2 | -3 | -2 | -1 | 1 | 2 | 1 | -3 | -2 | -2 | -1 | 1 | 2 | 1 | -2 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | 1 | 2 | 4 | 3 | 2 | 1 |
| 64 | -2 | -2 | -1 | 0 | 1 | 2 | 1 | -2 | -2 | -1 | 0 | 1 | 2 | 1 | -2 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 |
| 68 | -2 | -1 | 0 | 0 | 1 | 1 | 1 | -2 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 2 | 0 | 0 |
| 72 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 |
| 76 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 2 | 0 | -1 | -1 | -1 | 0 | 2 | 2 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 0 |
| 80 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 2 | 0 | -1 | -1 | -1 | 1 | 2 | 2 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 0 |

TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

| | | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 DEG |

### APRIL

| LAT | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 |
| 20 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 |
| 24 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | 0 |
| 28 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 3 | 3 | 3 | 2 | 1 | 0 | 1 | 3 | 4 | 3 | 2 | 0 | 0 |
| 36 | 0 | 1 | 4 | 1 | 1 | 1 | 0 | 1 | 3 | 3 | 3 | 2 | 1 | 0 | 2 | 4 | 4 | 3 | 2 | 1 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | 0 |
| 40 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 1 | 3 | 3 | 3 | 2 | 1 | 0 | 2 | 3 | 3 | 3 | 2 | 1 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 |
| 44 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 |
| 48 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 |
| 52 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | -1 |
| 56 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 0 | -1 |
| 60 | 1 | 2 | 3 | 2 | 1 | 0 | 1 | 1 | 3 | 3 | 2 | 0 | 0 | 1 | 1 | 3 | 3 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | -1 |
| 64 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 68 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | 0 | 0 |
| 76 | 2 | 1 | 1 | 0 | 0 | 0 | -1 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |
| 80 | 2 | 1 | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |

### MAY

| LAT | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -2 | -3 | -3 | -1 | 0 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 |
| 20 | -1 | -3 | -4 | -3 | -1 | 0 | 1 | -2 | -3 | -4 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 1 | 0 | 0 |
| 24 | -1 | -4 | -5 | -3 | -1 | 1 | 1 | -1 | -3 | -4 | -2 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 |
| 28 | -1 | -2 | -4 | -2 | 0 | 1 | 1 | 0 | -1 | -2 | -1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 32 | -1 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 |
| 36 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 3 | 4 | 3 | 2 | 2 | 1 | 2 | 4 | 4 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 1 | 0 | 0 | 0 |
| 40 | 0 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 4 | 3 | 2 | 1 | 1 | 1 | 3 | 4 | 2 | 1 | 0 | 1 | 2 | 3 | 3 | 1 | 0 | 0 | 0 |
| 44 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 1 | 0 | 0 | 0 |
| 48 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | 0 | 0 |
| 52 | -1 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 0 |
| 56 | -1 | 1 | 2 | 3 | 1 | 0 | 0 | 0 | 2 | 3 | 3 | 1 | -1 | -1 | 1 | 2 | 3 | 2 | 0 | -1 | -1 | 1 | 2 | 2 | 1 | 0 | -1 | -1 |
| 60 | 0 | 1 | 3 | 3 | 1 | -1 | 0 | 0 | 2 | 3 | 3 | 0 | -1 | -1 | 1 | 2 | 3 | 2 | 0 | -2 | -1 | 1 | 2 | 1 | 0 | -1 | -1 | -1 |
| 64 | 0 | 1 | 2 | 2 | 1 | -1 | -1 | 0 | 1 | 3 | 2 | 0 | -2 | -1 | 1 | 1 | 2 | 1 | -1 | -2 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | -1 |
| 68 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| 72 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 |
| 76 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 |
| 80 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -2 | -2 | -2 | -2 | -1 | 0 | 0 |

### JUNE

| LAT | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -2 | -1 | 0 | 1 | 1 | 0 | -2 | -2 | -2 | -1 | 0 | 1 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 |
| 20 | 0 | -1 | -2 | -1 | 0 | 1 | 1 | -1 | -2 | -3 | -2 | -1 | 1 | 1 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 |
| 24 | -1 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | -1 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 1 |
| 36 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 3 | 2 | 1 | 0 | 1 | 3 | 4 | 4 | 4 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 1 | 1 |
| 40 | 0 | 1 | 1 | 2 | 1 | 0 | -1 | 1 | 2 | 3 | 3 | 2 | 0 | 0 | 1 | 2 | 4 | 4 | 3 | 1 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 0 |
| 44 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 1 | 0 | 0 | 0 |
| 48 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 3 | 3 | 3 | 0 | -1 | -1 | 1 | 3 | 4 | 2 | 0 | -1 | 0 | 1 | 3 | 3 | 1 | 0 | 0 | 0 |
| 52 | 2 | 2 | 2 | 2 | 1 | -1 | -1 | 2 | 3 | 4 | 2 | 0 | -1 | -1 | 1 | 3 | 4 | 2 | -1 | -1 | -1 | 1 | 2 | 2 | 1 | -1 | 0 | -1 |
| 56 | 2 | 2 | 2 | 2 | -1 | -2 | -2 | 2 | 3 | 3 | 2 | 0 | -3 | -2 | 1 | 3 | 3 | 2 | -1 | -2 | -2 | 1 | 2 | 1 | 0 | -1 | -1 | -1 |
| 60 | 2 | 2 | 2 | 2 | 0 | -2 | -2 | 1 | 3 | 3 | 2 | -1 | -3 | -3 | 1 | 2 | 2 | 1 | -1 | -3 | -2 | 0 | 2 | 1 | 0 | -2 | -2 | -1 |
| 64 | 1 | 2 | 2 | 1 | 0 | -2 | -2 | 1 | 2 | 2 | 1 | 0 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -2 | -2 | 0 | 1 | 0 | 0 | -2 | -2 | -2 |
| 68 | 1 | 1 | 1 | 1 | 0 | -2 | -1 | 1 | 1 | 1 | 1 | 0 | -2 | -2 | 0 | 0 | 1 | 1 | 0 | -1 | -2 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| 72 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | -1 |
| 76 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 80 | -1 | 0 | 0 | 0 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | -2 | -1 | 0 | 1 | 0 | 0 |

### JULY

| LAT | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -2 | -3 | -2 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | -1 | -3 | -4 | -4 | -2 | -1 | 0 | -2 | -3 | -4 | -2 | -2 | -1 | -1 |
| 20 | -1 | -2 | -3 | -3 | -2 | 0 | 1 | -1 | -3 | -4 | -4 | -2 | 0 | 1 | -2 | -3 | -5 | -4 | -2 | -1 | 0 | -2 | -3 | -3 | -2 | -2 | -1 | 0 |
| 24 | -2 | -3 | -4 | -3 | -1 | 0 | 1 | -1 | -2 | -3 | -3 | -1 | 0 | 1 | 0 | 0 | -2 | -3 | -1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 28 | -1 | -2 | -2 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 1 | 1 | 1 | 1 | 2 | 5 | 6 | 4 | 2 | 1 | 0 |
| 32 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | 1 | 2 | 3 | 4 | 3 | 2 | 1 | 2 | 4 | 6 | 6 | 4 | 2 | 1 | 3 | 6 | 8 | 7 | 5 | 2 | 1 |
| 36 | -1 | 0 | 1 | 4 | 4 | 2 | 1 | 0 | 2 | 4 | 5 | 3 | 1 | 2 | 4 | 7 | 8 | 5 | 3 | 1 | 2 | 4 | 7 | 7 | 5 | 3 | 1 | |
| 40 | -1 | 0 | 1 | 3 | 4 | 2 | 1 | 0 | 2 | 4 | 5 | 4 | 2 | 1 | 1 | 3 | 5 | 5 | 4 | 2 | 1 | 1 | 3 | 5 | 5 | 3 | 2 | 1 |
| 44 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | 1 | 3 | 5 | 5 | 3 | 1 | 0 | 1 | 3 | 4 | 3 | 2 | 1 | 0 |
| 48 | -1 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 4 | 4 | 2 | 1 | 0 | 1 | 2 | 3 | 3 | 2 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 1 | 0 |
| 52 | 0 | 1 | 3 | 4 | 3 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 1 | 0 | 2 | 2 | 2 | 1 | 0 | -1 | -1 | 2 | 1 | 0 | -1 | -2 | -2 | -1 |
| 56 | 0 | 1 | 4 | 4 | 3 | 2 | 0 | 1 | 2 | 3 | 3 | 2 | 1 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | | 2 | 1 | -1 | -3 | -4 | -3 | -1 |
| 60 | 1 | 2 | 3 | 4 | 3 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | -1 | -1 | 2 | 0 | -1 | -2 | -3 | -2 | -2 | 1 | 0 | -2 | -4 | -4 | -3 | -2 |
| 64 | 1 | 2 | 3 | 3 | 2 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | -1 | -1 | 2 | 0 | -1 | -2 | -3 | -2 | -2 | 0 | -2 | -3 | -3 | -3 | -2 | -1 |
| 68 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 1 | 0 | -2 | -3 | -2 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | -1 |
| 72 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | -1 | 0 | 1 | -1 | -2 | -2 | -1 | -1 | | 0 | -2 | -2 | -1 | 0 | 0 | 0 |
| 76 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | -1 | | 0 | -2 | -2 | -1 | 0 | 0 | 0 |
| 80 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | -1 | -3 | -3 | -1 | 0 | 1 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 |

| KM LAT= | \| | LONGITUDE 60 E | | | | | | \| | LONGITUDE 90 E | | | | | | \| | LONGITUDE 120 E | | | | | | \| | LONGITUDE 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | | -80 | -70 | -60 | -50 | -40 | -30 | -20BEG |

**APRIL**

| 1. | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | ' | 1 | 1 | 0 | 0 | 0 |
| 20 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | . | 1 | 0 | 0 | 0 | 0 |
| 24 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 28 | 1 | 2 | 3 | 3 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 |
| 32 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | -2 | -1 | -1 | 0 |
| 36 | 2 | 3 | 3 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 |
| 40 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 |
| 44 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 |
| 48 | 2 | . | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 |
| 52 | 2 | 2 | 2 | 1 | 0 | 0 | -1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 |
| 56 | 2 | 1 | 1 | 0 | 0 | -1 | -1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -3 | -2 | -1 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 |
| 60 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -2 | -2 | -2 | -1 | -1 | -1 | 0 | -3 | -3 | -3 | -2 | -1 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 |
| 64 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | -1 | -1 | -3 | -3 | -3 | -2 | -1 | 0 | -2 | -2 | -2 | -2 | -1 | 0 | 0 |
| 68 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -1 | 0 | -1 | -3 | -2 | -2 | -1 | -1 | 0 | -2 | -2 | -1 | -1 | -1 | 0 | 0 |
| 72 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 | -2 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 1 |
| 76 | -2 | -2 | -1 | -1 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | -1 | 0 | 0 | -2 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 |
| 80 | -2 | -2 | -1 | -1 | -1 | 0 | 0 | -2 | -2 | -1 | -1 | -1 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 |

**MAY**

| 18 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 |
| 20 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 4 | 4 | 2 | 1 | 0 | 0 |
| 24 | -1 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | -1 | 2 | 3 | 4 | 3 | 1 | 0 | -1 | 2 | 4 | 4 | 3 | 1 | 0 | -1 |
| 28 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 3 | 1 | 0 | -1 | 1 | 2 | 4 | 2 | 1 | 0 | -1 |
| 32 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 |
| 36 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -1 | -1 | -1 | -1 |
| 40 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | -1 | -1 |
| 44 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | -1 | -1 |
| 48 | 2 | 2 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | -1 | 0 |
| 52 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | -1 | 0 | 1 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 |
| 56 | 2 | 2 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 0 | 1 | 0 | -2 | -3 | -1 | 0 | 1 | 0 | -2 | -3 | -3 | -1 | 0 | 0 |
| 60 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 1 | 0 |
| 64 | 1 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 1 | 1 |
| 68 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 |
| 72 | -1 | -2 | -2 | -2 | -1 | -1 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 76 | -2 | -2 | -2 | -1 | -1 | -1 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 80 | -2 | -3 | -2 | -1 | -1 | 0 | 0 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -1 | -1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |

**JUNE**

| 18 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 0 |
| 20 | -2 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 |
| 24 | 0 | 0 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 2 | 1 | 1 | 0 | 1 | 0 |
| 28 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| 32 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | -1 | -2 | -2 | -2 | -1 | -1 |
| 36 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | -1 | -1 | -1 | -3 | -3 | -3 | -1 | 0 |
| 40 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | -1 | -1 | -2 | -3 | -2 | -1 | 0 |
| 44 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -2 | -2 | -2 | -2 | -1 | 0 |
| 48 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 |
| 52 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -3 | -1 | 0 | 1 |
| 56 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 1 | -2 | -3 | -3 | -2 | 0 | 1 | 2 |
| 60 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | -1 | -2 | -2 | -2 | 0 | 1 | 2 | -2 | -3 | -3 | -2 | 1 | 3 | 3 |
| 64 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | -1 | -1 | -2 | -2 | -1 | 0 | 1 | -1 | -2 | -2 | -2 | 0 | 1 | 2 | -1 | -2 | -2 | -1 | 1 | 3 | 3 |
| 68 | -1 | -1 | -1 | -2 | -1 | -1 | | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 2 | -1 | -1 | -1 | -1 | 1 | 3 | 2 |
| 72 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 |
| 76 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 80 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | -1 |

**JULY**

| 18 | -2 | -3 | -1 | 0 | 0 | -1 | -1 | -2 | -1 | 2 | 3 | 2 | 0 | -1 | 0 | 1 | 4 | 4 | 3 | 1 | 0 | 1 | 3 | 4 | 4 | 3 | 2 | 0 |
| 20 | 3 | -2 | 0 | 1 | 0 | -1 | -1 | -2 | -1 | 3 | 4 | 2 | 0 | -1 | 0 | 1 | 5 | 5 | 4 | 1 | 0 | 2 | 3 | 5 | 5 | 4 | 2 | 0 |
| 24 | 1 | 3 | 4 | 3 | 1 | 0 | -1 | 1 | 3 | 6 | 6 | 3 | 1 | 0 | 1 | 2 | 5 | 6 | 4 | 1 | 0 | 1 | 2 | 3 | 3 | 3 | 1 | 0 |
| 28 | 3 | 6 | 7 | 6 | 3 | 1 | 0 | 2 | 4 | 6 | 7 | 4 | 1 | 0 | 1 | 1 | 3 | 5 | 3 | 1 | 0 | 0 | -1 | -2 | 0 | 0 | -1 | -1 |
| 32 | 3 | 6 | 8 | 8 | 5 | 2 | 1 | 2 | 4 | 5 | 6 | 4 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | -1 | -1 | -1 | -3 | -5 | -5 | -4 | -3 | -1 |
| 36 | 3 | 6 | 7 | 7 | 5 | 3 | 1 | 2 | 3 | 3 | 3 | 2 | 1 | 0 | 1 | 0 | -2 | -3 | -2 | -2 | -1 | -1 | -3 | -6 | -8 | -7 | -4 | -2 |
| 40 | 2 | 4 | 5 | 4 | 3 | 2 | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | -3 | -5 | -4 | -2 | -1 | 0 | -2 | -5 | -7 | -7 | -4 | -1 |
| 44 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 1 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | -2 | -4 | -4 | -2 | -1 | 0 | -2 | -4 | -5 | -5 | -3 | -1 |
| 48 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | -1 | -3 | -4 | -2 | -1 | 0 | -1 | -3 | -4 | -4 | -2 | -1 |
| 52 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 2 | 1 | 0 | -1 | -2 | -2 | 0 | 1 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | -1 |
| 56 | 2 | 1 | 0 | -1 | -3 | -2 | -1 | 1 | 1 | 0 | -1 | -2 | -2 | 0 | 1 | 0 | 0 | -1 | -1 | | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 |
| 60 | 2 | 1 | -1 | -3 | -4 | -2 | -1 | 1 | 1 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | -1 | 0 | 1 | 1 | 1 |
| 64 | 1 | 0 | -1 | -3 | -3 | -2 | -1 | 1 | 0 | 0 | 0 | -1 | -1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 2 | 2 | 1 |
| 68 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 2 | 1 |
| 72 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | -1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 76 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 80 | -1 | -1 | 0 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |

TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

## AUGUST

| KM LAT= | 180 -80 | -70 | -60 | -50 | -40 | -30 | -20 | 150W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 120W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 90W -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 3 | 7 | 7 | 5 | 3 | 1 | 0 | 3 | 5 | 3 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -4 | -3 | -1 | 0 | 1 | -1 | -5 | -6 | -4 | -1 | 0 |
| 20 | 5 | 9 | 9 | 6 | 3 | 1 | 0 | 4 | 5 | 3 | 0 | -1 | 0 | 0 | 2 | 0 | -4 | -6 | -4 | -2 | 0 | -1 | -4 | -7 | -7 | -4 | -2 | 0 |
| 24 | 2 | 5 | 6 | 5 | 2 | 1 | 0 | -1 | 0 | -1 | -2 | -2 | -1 | 0 | -3 | -5 | -8 | -8 | -5 | -2 | 0 | -4 | -7 | -9 | -8 | -4 | -2 | 0 |
| 28 | 0 | -1 | -1 | 1 | 0 | 0 | 0 | -2 | -5 | -6 | -5 | -4 | -2 | 0 | -3 | -6 | -8 | -8 | -5 | -2 | 0 | -3 | 5 | -6 | -6 | -3 | -1 | 0 |
| 32 | -1 | -4 | -6 | -5 | -3 | -2 | -1 | -3 | -6 | -8 | -7 | -5 | -3 | -1 | -3 | -6 | -6 | -6 | -4 | -2 | 0 | -2 | -3 | -2 | -1 | -1 | 0 | 1 |
| 36 | -2 | -5 | -9 | -8 | -5 | -3 | -1 | -3 | -6 | -8 | -7 | -5 | -3 | -1 | -3 | -5 | -4 | -2 | -2 | -1 | 0 | - | -2 | 1 | 3 | 2 | 2 | 1 |
| 40 | -2 | -5 | -9 | -9 | -6 | -3 | -1 | -3 | -5 | -6 | -5 | -4 | -2 | -1 | -3 | -4 | -2 | 1 | 1 | 1 | 0 | -1 | -1 | 2 | - | 4 | 3 | 1 |
| 44 | -3 | -4 | -6 | -6 | -4 | -2 | -1 | -3 | -4 | -4 | -2 | -1 | 0 | 0 | -2 | -3 | 0 | 2 | 3 | 2 | 1 | -1 | 0 | 3 | 5 | 4 | 3 | 1 |
| 48 | -3 | -4 | -5 | -3 | -1 | -1 | 0 | -2 | -3 | -2 | 0 | 1 | 1 | 0 | -1 | -1 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 5 | 4 | 3 | 1 |
| 52 | -2 | -3 | -4 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 5 | 4 | 2 | 1 | 2 | 4 | 6 | 6 | 4 | 2 | 1 |
| 56 | -1 | -2 | -3 | -1 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 3 | 4 | 5 | 5 | 4 | 2 | 0 | 4 | 6 | 8 | 7 | 4 | 2 | 0 |
| 60 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 6 | 6 | 5 | 3 | 1 | 0 | 4 | 7 | 8 | 7 | 4 | 1 | -1 |
| 64 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 7 | 6 | 5 | 3 | 1 | 0 | 5 | 8 | 7 | 6 | 4 | 0 | -1 |
| 68 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 4 | 4 | 4 | 2 | 1 | 1 | 1 | 4 | 6 | 6 | 4 | 3 | 1 | 0 | 4 | 7 | 5 | 5 | 3 | 1 | 0 |
| 72 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 3 | 4 | 4 | 2 | 1 | 1 | 1 | 4 | 6 | 5 | 3 | 2 | 2 | 1 | 3 | 5 | 4 | 3 | 2 | 1 | 0 |
| 76 | 2 | 2 | 2 | 0 | 0 | -1 | 0 | 3 | 4 | 3 | 2 | 1 | 1 | 1 | 3 | 5 | 4 | 3 | 3 | 2 | 1 | 2 | 4 | 2 | 2 | 2 | 2 | 1 |
| 80 | 2 | 3 | 2 | 0 | 0 | -1 | 0 | 3 | 4 | 3 | 2 | 2 | 1 | 1 | 3 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 3 | 1 | 1 | 1 | 2 | 1 |

## SEPTEMBER

| KM LAT= | 180 -80 | -70 | -60 | -50 | -40 | -30 | -20 | 150W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 120W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 90W -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 4 | 4 | 0 | -1 | -1 | 0 | 0 | 3 | 1 | -3 | -4 | -2 | -1 | 0 | 1 | -2 | -6 | -5 | -3 | -1 | 0 | -1 | -5 | -8 | -6 | -3 | -1 | 0 |
| 20 | 4 | 3 | -1 | -2 | -1 | 0 | 0 | 1 | -1 | -4 | -5 | -3 | -1 | 0 | -2 | -5 | -8 | -7 | -4 | -1 | 0 | -5 | -9 | -10 | -7 | -4 | -1 | 0 |
| 24 | -2 | -3 | -4 | -3 | -2 | -1 | 0 | -5 | -7 | -8 | -6 | -4 | -1 | 0 | -7 | -9 | -10 | -8 | -4 | -1 | 0 | -7 | -10 | -11 | -8 | -4 | -1 | 0 |
| 28 | -4 | -6 | -6 | -4 | -3 | -1 | 0 | -6 | -8 | -9 | -7 | -4 | -1 | 0 | -6 | -9 | -9 | -7 | -4 | 0 | 1 | -5 | -7 | -7 | -6 | -2 | 0 | 1 |
| 32 | -4 | -7 | -7 | -5 | -3 | -1 | 0 | -6 | -8 | -7 | -5 | -3 | -1 | 1 | -6 | -7 | -6 | -4 | -2 | 1 | 1 | -4 | -4 | -2 | -2 | 0 | 1 | 1 |
| 36 | -4 | -7 | -6 | -4 | -3 | -1 | 0 | -5 | -7 | -5 | -3 | -2 | 0 | 1 | -5 | -5 | -2 | -1 | 0 | 1 | 1 | -3 | -2 | 1 | 2 | 2 | 2 | 1 |
| 40 | -4 | -5 | -4 | -3 | -2 | -1 | 0 | -4 | -5 | -3 | -1 | 0 | 1 | 1 | -4 | -3 | 0 | 2 | 2 | 2 | 1 | -2 | 0 | 4 | 4 | 3 | 2 | 1 |
| 44 | -3 | -4 | -3 | -2 | -1 | 0 | 0 | -3 | -3 | -1 | 0 | 1 | 1 | 1 | -2 | -1 | 1 | 2 | 2 | 2 | 1 | 0 | 2 | 4 | 4 | 3 | 2 | 1 |
| 48 | -3 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 2 | 4 | 5 | 3 | 2 | 1 | 1 |
| 52 | -3 | -5 | -4 | -3 | -2 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 3 | 5 | 5 | 4 | 2 | 1 | 0 |
| 56 | -4 | -6 | -6 | -4 | -2 | 0 | 0 | -1 | -3 | -2 | -1 | -1 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 4 | 5 | 6 | 5 | 2 | 1 | 0 |
| 60 | -3 | -5 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -1 | 0 | 0 | 1 | 0 | 3 | 2 | 3 | 2 | 1 | 1 | 0 | 5 | 6 | 6 | 5 | 2 | 0 | 0 |
| 64 | -2 | -3 | -2 | -1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 3 | 3 | 2 | 1 | 1 | 0 | 5 | 5 | 5 | 4 | 2 | 0 | 0 |
| 68 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 4 | 3 | 3 | 2 | 1 | 1 | 0 | 4 | 4 | 3 | 2 | 1 | 0 | 0 |
| 72 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 3 | 2 | 1 | 1 | 1 | 0 | 3 | 3 | 2 | 1 | 1 | 0 | 0 |
| 76 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 1 | 0 | 3 | 3 | 1 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 0 |
| 80 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 1 | 1 | 0 |

## OCTOBER

| KM LAT= | 180 -80 | -70 | -60 | -50 | -40 | -30 | -20 | 150W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 120W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 90W -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 4 | 5 | 4 | 2 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | -1 | 0 | -2 | -4 | -5 | -3 | -1 | 0 | 0 |
| 20 | 4 | 6 | 4 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | -2 | -3 | -3 | -3 | -1 | 0 | 0 | -4 | -6 | -6 | -4 | -2 | 0 | 0 |
| 24 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -4 | -5 | -5 | -3 | -2 | -1 | 0 | -4 | -7 | -7 | -5 | -2 | 0 | 0 |
| 28 | -1 | 0 | 1 | 0 | 0 | -1 | 0 | -3 | -2 | -2 | -2 | -2 | -1 | 0 | -3 | -4 | -4 | -3 | -2 | -1 | 0 | -3 | -5 | -5 | -4 | -2 | 0 | 1 |
| 32 | -2 | -3 | -3 | -2 | -1 | 0 | | -3 | -3 | -3 | -2 | -1 | 0 | | -2 | -3 | -3 | -3 | -2 | 0 | 1 | -2 | -2 | -2 | -2 | -1 | 0 | 1 |
| 36 | -3 | -4 | -5 | -4 | -2 | -1 | 0 | -2 | -3 | -3 | -3 | -2 | -1 | 0 | -2 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 40 | -2 | -5 | -6 | -5 | -3 | -1 | 0 | -2 | -2 | -3 | -2 | -2 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 1 |
| 44 | -2 | -4 | -6 | -4 | -3 | -1 | 0 | -2 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 2 | 1 | 0 |
| 48 | -3 | -5 | -5 | -4 | -2 | 0 | 0 | -2 | -3 | -3 | -3 | -1 | 0 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 0 |
| 52 | -3 | -5 | -5 | -4 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 0 | 0 |
| 56 | -3 | -4 | -4 | -2 | 0 | 1 | 0 | -2 | -3 | -2 | -1 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | 0 |
| 60 | -2 | -2 | -2 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | 0 |
| 64 | -1 | -1 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | -1 |
| 68 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | -1 |
| 72 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | -1 | 1 | 1 | 1 | 1 | 0 | -1 | -1 |
| 76 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 |
| 80 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 2 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 |

## NOVEMBER

| KM LAT= | 180 -80 | -70 | -60 | -50 | -40 | -30 | -20 | 150W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 120W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 90W -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 1 | -2 | -5 | -5 | -3 | -1 | 0 | 1 |
| 20 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 1 | -1 | -3 | -4 | -3 | -1 | 0 | 1 | -3 | -5 | -5 | -4 | -1 | 0 | 1 |
| 24 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | -1 | -3 | -4 | -3 | -1 | 0 | 1 | -2 | -5 | -5 | -3 | -1 | 1 | 1 |
| 28 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 1 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 32 | -3 | -4 | -4 | -3 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 36 | -4 | -5 | -4 | -3 | -1 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | 0 |
| 40 | -4 | -5 | -4 | -2 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 4 | 5 | 4 | 1 | 0 | 0 |
| 44 | -3 | -4 | -3 | -2 | 0 | 0 | 0 | -2 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | 0 |
| 48 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 |
| 52 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 |
| 56 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | -1 | 0 | 0 |
| 64 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | -1 | 0 | 0 |
| 68 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0 |
| 72 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0 |
| 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |

S HEMISPHERE                    TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

| | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 DEG |

### AUGUST

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -3 | -5 | -4 | -2 | 0 | 0 | -1 | -3 | -3 | 0 | 1 | 1 | 1 | -2 | -3 | -2 | 1 | 1 | 1 | 1 | -2 | -4 | -3 | -1 | 0 | 0 | 0 |
| 20 | -2 | -5 | -6 | -4 | -2 | 0 | 0 | -3 | -4 | -3 | 0 | 1 | 1 | 1 | -3 | -3 | -2 | 1 | 2 | 2 | 1 | -3 | -4 | -3 | -1 | 0 | 0 | 0 |
| 24 | -3 | -5 | -5 | -3 | -1 | 0 | 1 | -1 | -1 | -1 | 1 | 2 | 2 | 1 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 28 | -2 | -2 | -1 | -1 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 3 | 2 | 1 | 1 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 3 | 3 | 1 | 0 | 0 | 0 |
| 32 | -1 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 2 | 4 | 4 | 4 | 2 | 1 | 1 | 3 | 4 | 3 | 2 | 1 | 0 | 2 | 4 | 5 | 2 | 0 | 0 | 0 |
| 36 | -1 | 1 | 3 | 5 | 4 | 2 | 1 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | 1 | 3 | 4 | 2 | 1 | 0 | 0 | 2 | 4 | 5 | 2 | 0 | 0 | 0 |
| 40 | 0 | 1 | 4 | 5 | 4 | 2 | 1 | 1 | 2 | 3 | 3 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | -1 | -1 | -1 | 3 | 4 | 4 | 2 | 0 | 0 | 0 |
| 44 | 1 | 2 | 4 | 4 | 3 | 1 | 0 | 2 | 3 | 3 | 2 | 0 | -1 | -1 | 3 | 4 | 3 | 0 | -1 | -2 | -1 | 3 | 4 | 3 | 1 | 0 | -1 | 0 |
| 48 | 2 | 3 | 5 | 3 | 2 | 1 | 1 | 3 | 4 | 3 | 1 | -1 | -1 | 0 | 3 | 4 | 2 | -1 | -2 | -2 | -1 | 2 | 2 | 1 | -1 | -1 | -1 | -1 |
| 52 | 3 | 5 | 7 | 4 | 2 | 1 | 1 | 3 | 5 | 4 | 1 | -1 | -1 | -1 | 2 | 3 | 1 | -3 | -3 | -2 | -2 | 0 | 0 | -2 | -4 | -3 | -2 | -2 |
| 56 | 3 | 6 | 8 | 6 | 2 | 0 | 0 | 2 | 4 | 4 | 1 | -1 | -2 | -1 | 0 | 1 | -1 | -4 | -4 | -3 | -2 | -2 | -2 | -4 | -6 | -5 | -3 | -2 |
| 60 | 4 | 6 | 7 | 5 | 2 | -1 | -1 | 1 | 3 | 3 | 0 | -2 | -2 | -2 | -1 | -2 | -2 | -4 | -5 | -4 | -2 | -3 | -4 | -5 | -6 | -6 | -3 | -2 |
| 64 | 3 | 5 | 5 | 4 | 2 | -1 | -2 | 1 | 1 | 1 | 0 | -2 | -3 | -2 | -2 | -3 | -3 | -4 | -5 | -3 | -2 | -4 | -5 | -5 | -5 | -4 | -2 | -1 |
| 68 | 2 | 4 | 3 | 3 | 1 | -1 | -1 | 0 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -4 | -3 | -3 | -4 | -2 | -1 | -4 | -5 | -4 | -3 | -3 | -1 | -1 |
| 72 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -2 | -2 | -1 | -2 | -5 | -3 | -2 | -2 | -2 | -1 | -3 | -5 | -3 | -2 | -1 | -1 | -1 |
| 76 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | -3 | -3 | -2 | -2 | -1 | 0 | -2 | -5 | -3 | -2 | -2 | -1 | -1 | -3 | -4 | -2 | -1 | 0 | 0 | -1 |
| 80 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | -1 | -3 | -3 | -2 | -2 | -1 | 0 | -2 | -4 | -3 | -1 | -1 | -1 | -1 | -2 | -4 | -2 | 0 | 1 | 0 | -1 |

### SEPTEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -3 | -8 | -9 | -6 | -3 | -1 | 0 | -4 | -7 | -6 | -3 | -1 | 0 | 0 | -4 | -4 | -1 | 0 | 0 | 0 | 0 | -3 | 1 | 5 | 4 | 2 | 1 | 0 |
| 20 | -6 | -10 | -10 | -6 | -3 | -1 | 0 | -5 | -8 | -7 | -3 | -1 | 0 | 0 | -3 | -2 | 0 | 1 | 1 | 0 | 0 | 0 | 4 | 7 | 5 | 3 | 1 | 0 |
| 24 | -5 | -8 | -9 | -6 | -2 | 0 | 0 | -1 | -3 | -4 | -2 | -1 | 0 | 0 | 3 | 3 | 3 | 2 | 1 | 1 | 0 | 6 | 9 | 9 | 7 | 3 | 1 | 0 |
| 28 | -2 | -3 | -4 | -3 | -1 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 4 | 6 | 5 | 4 | 2 | 1 | 0 | 6 | 9 | 9 | 7 | 3 | 1 | 0 |
| 32 | -1 | 0 | 2 | 1 | 2 | 2 | 1 | 2 | 4 | 5 | 3 | 3 | 2 | 0 | 4 | 7 | 7 | 5 | 3 | 1 | 0 | 6 | 8 | 7 | 5 | 3 | 0 | 0 |
| 36 | 0 | 2 | 5 | 4 | 3 | 2 | 1 | 2 | 5 | 7 | 5 | 4 | 2 | 0 | 4 | 7 | 6 | 5 | 3 | 1 | 0 | 5 | 7 | 4 | 3 | 1 | 0 | -1 |
| 40 | 0 | 3 | 6 | 6 | 4 | 2 | 1 | 2 | 6 | 7 | 6 | 4 | 2 | 0 | 4 | 6 | 5 | 4 | 2 | 1 | -1 | 4 | 5 | 2 | 1 | 0 | -1 | -1 |
| 44 | 2 | 4 | 6 | 5 | 3 | 2 | 1 | 3 | 5 | 6 | 4 | 3 | 1 | 0 | 3 | 4 | 3 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | -1 | -1 |
| 48 | 3 | 6 | 6 | 4 | 2 | 1 | 1 | 4 | 6 | 6 | 4 | 2 | 1 | 0 | 3 | 4 | 3 | 2 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | -1 |
| 52 | 4 | 7 | 7 | 5 | 2 | 1 | 1 | 4 | 7 | 6 | 4 | 2 | 1 | 0 | 3 | 5 | 4 | 2 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | -1 |
| 56 | 5 | 8 | 8 | 6 | 3 | 1 | 0 | 5 | 8 | 8 | 5 | 2 | 0 | 0 | 4 | 6 | 5 | 3 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 60 | 5 | 7 | 7 | 5 | 2 | 0 | 0 | 4 | 7 | 6 | 4 | 1 | 0 | -1 | 2 | 4 | 3 | 2 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | 0 |
| 64 | 5 | 6 | 5 | 4 | 2 | 0 | -1 | 3 | 5 | 4 | 3 | 1 | -1 | -1 | 1 | 2 | 2 | 1 | 0 | -1 | -1 | -2 | -2 | -1 | -1 | -1 | -1 | 0 |
| 68 | 4 | 4 | 3 | 3 | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -1 | -1 | 0 |
| 72 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | -2 | -3 | -2 | -1 | -1 | -1 | 0 |
| 76 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -1 | -1 | 0 | -1 | 0 | -2 | -2 | -2 | -1 | -1 | -1 | 0 |
| 80 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | -2 | -2 | -1 | -1 | 0 | 0 | 1 | -2 | -2 | -2 | -1 | -1 | -1 | 0 |

### OCTOBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -3 | -5 | -6 | -3 | -1 | 0 | 0 | -3 | -6 | -6 | -3 | -1 | 0 | 0 | -3 | -5 | -4 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | -1 | 0 | 0 |
| 20 | -4 | -7 | -7 | -4 | -1 | 0 | 0 | -4 | -6 | -6 | -4 | -1 | 0 | 0 | -3 | -5 | -4 | -2 | -1 | 0 | 0 | -2 | -2 | -1 | -1 | -1 | 0 | 0 |
| 24 | -4 | -6 | -7 | -5 | -2 | 0 | 0 | -2 | -4 | -6 | -4 | -1 | 0 | 0 | 0 | -1 | -3 | -2 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 28 | -2 | -3 | -5 | -4 | -1 | 0 | 0 | 0 | -1 | -3 | -2 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 |
| 32 | -1 | -1 | -1 | -1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 4 | 4 | 3 | 2 | 1 | 0 | 3 | 5 | 5 | 4 | 2 | 1 | 0 |
| 36 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 4 | 3 | 2 | 1 | 0 | 2 | 5 | 6 | 5 | 3 | 1 | 0 | 3 | 5 | 6 | 5 | 3 | 1 | 0 |
| 40 | 1 | 2 | 3 | 3 | 2 | 1 | 0 | 2 | 4 | 5 | 5 | 3 | 1 | 0 | 2 | 4 | 6 | 5 | 3 | 1 | 0 | 2 | 4 | 5 | 4 | 2 | 0 | 0 |
| 44 | 1 | 3 | 4 | 3 | 2 | 1 | 0 | 2 | 4 | 5 | 5 | 3 | 1 | 0 | 2 | 4 | 6 | 4 | 2 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 0 |
| 48 | 2 | 4 | 5 | 4 | 2 | 1 | 0 | 2 | 4 | 6 | 5 | 3 | 1 | 0 | 2 | 4 | 5 | 4 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 0 | 0 | 0 |
| 52 | 2 | 4 | 5 | 4 | 2 | 0 | 0 | 3 | 5 | 6 | 4 | 2 | 0 | 0 | 3 | 4 | 4 | 2 | 0 | -1 | 0 | 2 | 3 | 2 | 0 | -1 | 0 | 0 |
| 56 | 2 | 4 | 4 | 3 | 2 | 0 | 0 | 3 | 5 | 5 | 3 | 1 | -1 | 0 | 3 | 4 | 4 | 2 | 0 | -1 | 0 | 1 | 2 | 1 | -1 | -2 | -1 | 0 |
| 60 | 2 | 2 | 3 | 2 | 1 | -1 | -1 | 2 | 3 | 2 | 1 | 0 | -1 | -1 | 2 | 3 | 2 | 0 | -1 | -1 | -1 | 1 | 0 | 0 | -1 | -2 | -2 | -1 |
| 64 | 1 | 1 | 1 | 1 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -2 | -1 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 1 | 1 | 1 |
| 76 | -1 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 1 | 1 | 1 |
| 80 | -1 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | -2 | -1 | 0 | 1 | 1 | 1 |

### NOVEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -3 | -5 | -5 | -3 | -1 | 0 | 0 | -3 | -4 | -4 | -2 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 20 | -3 | -6 | -5 | -4 | 0 | 1 | 0 | -3 | -4 | -4 | -2 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | 1 | 2 | 2 | 0 | 0 | 0 |
| 24 | -2 | -4 | -4 | -3 | 0 | 1 | 0 | -2 | -3 | -3 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 |
| 28 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | 0 | 0 |
| 32 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 3 | 4 | 4 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 |
| 36 | 3 | 5 | 5 | 3 | 1 | 0 | 0 | 4 | 5 | 5 | 3 | 1 | 0 | 0 | 3 | 5 | 4 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 0 |
| 40 | 3 | 6 | 6 | 4 | 1 | 0 | 0 | 4 | 6 | 5 | 3 | 1 | 0 | 0 | 3 | 5 | 4 | 2 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| 44 | 3 | 5 | 5 | 3 | 1 | 0 | 0 | 3 | 5 | 4 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 48 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 64 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 68 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 72 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 76 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |

S HEMISPHERE                                TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

|          | LONGITUDE 60 E | | | | | | | LONGITUDE 90 E | | | | | | | LONGITUDE 120 E | | | | | | | LONGITUDE 150 E | | | | | | |
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 DEG |

## AUGUST

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18 | -2 | -4 | -3 | -2 | -1 | -1 | -1 | -2 | -2 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 4 | 4 | 2 | 0 | -1 | 1 | 5 | 8 | 7 | 4 | 1 | 0 |
| 20 | -3 | -4 | -3 | -2 | -1 | -1 | -1 | -1 | -2 | 0 | 0 | -1 | -1 | -1 | 1 | 3 | 6 | 5 | 2 | 0 | -1 | 4 | 8 | 10 | 8 | 4 | 2 | 0 |
| 24 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | 2 | 2 | 3 | 1 | 0 | -1 | -1 | 3 | 5 | 7 | 6 | 3 | 0 | -1 | 3 | 6 | 9 | 8 | 4 | 1 | 0 |
| 28 | 2 | 4 | 3 | 0 | -1 | -1 | -1 | 2 | 4 | 4 | 2 | 0 | 0 | -1 | 2 | 4 | 5 | 5 | 3 | 1 | 0 | 1 | 2 | 4 | 5 | 3 | 1 | 0 |
| 32 | 2 | 5 | 5 | 2 | 0 | 0 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | 0 | 2 | 3 | 2 | 3 | 2 | 1 | 0 | 1 | -1 | -2 | 0 | 0 | 0 | 0 |
| 36 | 2 | 5 | 6 | 3 | 1 | 1 | 0 | 2 | 4 | 4 | 3 | 2 | 1 | 1 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | -2 | -5 | -5 | -2 | -1 | -1 |
| 40 | 2 | 4 | 5 | 4 | 2 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 0 | -1 | -2 | 0 | 0 | 0 | -1 | -3 | -7 | -7 | -4 | -2 | -1 |
| 44 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -6 | -6 | -4 | -2 | -1 |
| 48 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -2 | -3 | -3 | -2 | -2 | -1 | 0 | -3 | -4 | -5 | -4 | -2 | -1 | 0 |
| 52 | -1 | -2 | -3 | -3 | -2 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -3 | -4 | -3 | -2 | -1 | 0 | 1 | -3 | -4 | -4 | -2 | -1 | 0 | 1 |
| 56 | -3 | -4 | -5 | -5 | -4 | -2 | -1 | -3 | -4 | -4 | -3 | -1 | 0 | 0 | -3 | -4 | -4 | -1 | 1 | 1 | 2 | -2 | -4 | -4 | -1 | 1 | 2 | 2 |
| 60 | -4 | -5 | -5 | -5 | -3 | -1 | 0 | -4 | -4 | -5 | -3 | 0 | 1 | 1 | -3 | -4 | -4 | -1 | 2 | 2 | 2 | -1 | -3 | -3 | -1 | 1 | 2 | 2 |
| 64 | -5 | -5 | -5 | -4 | -2 | 0 | 0 | -4 | -4 | -4 | -2 | 1 | 2 | 1 | -2 | -3 | -3 | -1 | 2 | 2 | 2 | 0 | -2 | -2 | -1 | 1 | 2 | 2 |
| 68 | -4 | -5 | -4 | -2 | -1 | 0 | 0 | -4 | -3 | -3 | -1 | 1 | 1 | 1 | -2 | -2 | -2 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 1 |
| 72 | -4 | -4 | -2 | -1 | 0 | 0 | 0 | -3 | -2 | -2 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 |
| 76 | -3 | -3 | -1 | 0 | 1 | 1 | 0 | -2 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | -2 | -1 | 0 |
| 80 | -2 | -2 | 0 | 1 | 1 | 0 | 0 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -2 | -1 | 1 | 1 | 1 | -1 | -2 | -2 | -1 |

## SEPTEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18 | -1 | 4 | 9 | 7 | 3 | 1 | 0 | 1 | 6 | 10 | 7 | 4 | 1 | 0 | 3 | 6 | 7 | 5 | 3 | 1 | 0 | 4 | 5 | 4 | 2 | 1 | 0 | 0 |
| 20 | 3 | 8 | 11 | 8 | 4 | 1 | 0 | 5 | 9 | 12 | 8 | 4 | 2 | 0 | 5 | 8 | 8 | 6 | 3 | 1 | 0 | 5 | 5 | 4 | 2 | 1 | 0 | 0 |
| 24 | 7 | 11 | 13 | 9 | 4 | 1 | 0 | 6 | 10 | 13 | 9 | 4 | 1 | 0 | 4 | 7 | 8 | 6 | 3 | 1 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 28 | 6 | 10 | 10 | 8 | 4 | 1 | 0 | 5 | 7 | 9 | 7 | 3 | 0 | -1 | 2 | 3 | 4 | 4 | 1 | 0 | -1 | -1 | -2 | -1 | -1 | -1 | -1 | -1 |
| 32 | 6 | 7 | 6 | 4 | 2 | 0 | -1 | 4 | 4 | 3 | 3 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | -1 | -2 | -1 | -2 | -4 | -4 | -3 | -3 | -2 | -1 |
| 36 | 5 | 5 | 2 | 0 | 0 | -1 | -1 | 3 | 2 | -1 | -2 | -2 | -2 | -1 | 1 | -1 | -3 | -4 | -3 | -2 | -1 | -2 | -4 | -5 | -5 | -3 | -2 | 0 |
| 40 | 4 | 2 | -2 | -3 | -2 | -2 | -1 | 2 | 0 | -4 | -5 | -4 | -2 | -1 | 0 | -2 | -5 | -5 | -4 | -2 | -1 | -2 | -4 | -5 | -5 | -3 | -2 | 0 |
| 44 | 1 | 0 | -3 | -3 | -2 | -1 | -1 | 0 | -2 | -5 | -5 | -3 | -2 | -1 | -1 | -3 | -5 | -5 | -4 | -2 | 0 | -2 | -4 | -4 | -4 | -3 | -1 | 0 |
| 48 | 0 | -2 | -3 | -2 | -1 | -1 | -1 | -2 | -4 | -5 | -4 | -2 | -1 | -1 | -3 | -4 | -5 | -4 | -3 | -1 | 0 | -3 | -4 | -4 | -3 | -2 | -1 | 0 |
| 52 | -1 | -2 | -3 | -2 | -1 | 0 | -1 | -3 | -5 | -5 | -3 | -2 | -1 | -1 | -4 | -6 | -6 | -4 | -3 | -1 | 0 | -4 | -6 | -5 | -4 | -3 | -1 | 0 |
| 56 | -1 | -2 | -3 | -2 | 0 | 0 | 0 | -3 | -5 | -5 | -3 | -1 | -1 | 0 | -5 | -7 | -7 | -5 | -2 | -1 | 0 | -5 | -7 | -7 | -5 | -3 | -1 | 0 |
| 60 | -2 | -2 | -3 | -2 | -1 | 0 | 0 | -4 | -5 | -5 | -3 | -1 | -1 | 0 | -5 | -6 | -6 | -4 | -2 | 0 | 0 | -5 | -6 | -6 | -4 | -2 | 0 | 0 |
| 64 | -3 | -3 | -3 | -3 | -1 | -1 | 0 | -4 | -4 | -4 | -3 | -1 | 0 | 0 | -4 | -5 | -5 | -3 | -1 | 0 | 0 | -4 | -5 | -4 | -2 | -1 | 0 | 0 |
| 68 | -3 | -3 | -2 | -2 | -1 | -1 | 0 | -3 | -3 | -3 | -2 | -1 | 0 | 0 | -3 | -3 | -3 | -2 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 1 | 0 |
| 72 | -3 | -2 | -2 | -2 | -1 | -1 | 0 | -2 | -2 | -2 | -1 | -1 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 76 | -2 | -2 | -2 | -2 | -1 | -1 | 0 | -2 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 80 | -1 | -2 | -2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |

## OCTOBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18 | -1 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 4 | 5 | 4 | 2 | 1 | 0 | 4 | 7 | 7 | 5 | 3 | 1 | 0 | 5 | 7 | 6 | 4 | 2 | 1 | 0 |
| 20 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 2 | 5 | 6 | 4 | 2 | 1 | 0 | 5 | 8 | 8 | 5 | 3 | 1 | 0 | 5 | 8 | 7 | 4 | 2 | 1 | 0 |
| 24 | 2 | 4 | 4 | 3 | 1 | 0 | 0 | 3 | 6 | 7 | 5 | 2 | 1 | 0 | 4 | 7 | 7 | 5 | 3 | 1 | 0 | 3 | 6 | 6 | 4 | 2 | 0 | 0 |
| 28 | 3 | 4 | 5 | 4 | 2 | 0 | 0 | 3 | 4 | 5 | 4 | 2 | 0 | 0 | 2 | 3 | 4 | 4 | 2 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 |
| 32 | 3 | 4 | 5 | 4 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | 0 |
| 36 | 2 | 4 | 4 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -3 | -4 | -3 | -2 | -1 | 0 | -2 | -5 | -6 | -4 | -3 | -1 | 0 |
| 40 | 2 | 3 | 3 | 2 | 1 | 0 | -1 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | -5 | -6 | -5 | -3 | -1 | 0 | -2 | -6 | -8 | -6 | -3 | -1 | 0 |
| 44 | 1 | 2 | 2 | 1 | 1 | 0 | -1 | 0 | -1 | -3 | -2 | -1 | -1 | -1 | -1 | -4 | -6 | -5 | -3 | -1 | 0 | -2 | -6 | -7 | -5 | -3 | -1 | 0 |
| 48 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | -2 | -3 | -2 | -2 | -1 | -1 | -2 | -4 | -5 | -4 | -3 | -1 | 0 | -2 | -5 | -6 | -5 | -3 | -1 | 0 |
| 52 | 1 | 1 | 0 | 0 | -1 | 0 | -1 | 0 | -2 | -3 | -2 | -2 | -1 | -1 | -2 | -4 | -5 | -4 | -2 | -1 | 0 | -2 | -5 | -6 | -4 | -2 | -1 | 0 |
| 56 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | -1 | -2 | -3 | -2 | -2 | 0 | 0 | -2 | -4 | -4 | -3 | -1 | 0 | 0 | -2 | -5 | -5 | -3 | -1 | 0 | 0 |
| 60 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -2 | -3 | -3 | -1 | 0 | 1 | 1 |
| 64 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | -2 | -2 | -1 | -1 | -1 | 0 | 1 | -2 | -2 | -2 | -1 | 0 | 1 | 1 | -1 | -1 | -1 | 0 | 1 | 1 | 1 |
| 68 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -1 | -1 | -1 | 0 | 0 | 1 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | -1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 72 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 76 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | 0 | -1 | 0 | -1 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 80 | -1 | -2 | -1 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 |

## NOVEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18 | 1 | 3 | 4 | 3 | 1 | 0 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | 0 | 3 | 5 | 5 | 3 | 1 | 0 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 |
| 20 | 1 | 3 | 4 | 3 | 1 | 0 | 0 | 2 | 5 | 6 | 4 | 1 | 0 | 0 | 3 | 5 | 5 | 3 | 1 | 0 | 0 | 3 | 5 | 4 | 2 | 1 | 0 | 0 |
| 24 | 1 | 3 | 5 | 4 | 1 | 0 | 0 | 2 | 4 | 5 | 4 | 1 | 0 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 |
| 28 | 1 | 2 | 3 | 2 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 |
| 32 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -3 | -4 | -4 | -3 | -1 | 0 | 0 |
| 36 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 | -3 | -6 | -6 | -4 | -2 | 0 | 0 | -4 | -6 | -6 | -4 | -1 | 0 | 0 |
| 40 | 0 | -1 | -1 | -2 | -1 | 0 | 0 | -2 | -4 | -4 | -3 | -1 | 0 | 0 | -3 | -6 | -6 | -4 | -2 | 0 | 0 | -3 | -6 | -5 | -3 | -1 | 0 | 0 |
| 44 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | -2 | -4 | -4 | -3 | -1 | 0 | 0 | -3 | -5 | -5 | -3 | -1 | 0 | 0 | -3 | -6 | -5 | -3 | -1 | 0 | 0 |
| 48 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | 0 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 |
| 52 | 0 | -1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 56 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 60 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| 64 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 |
| 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | 0 |
| 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | 0 |

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|  | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**SEPTEMBER**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| 44 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 |
| 48 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 68 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | -1 |
| 72 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| 76 | 0 | 0 | 0 | -1 | 0 | 1 | 0 | 1 | 1 | 0 | -1 | 0 | 1 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| 80 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 1 | 1 | 0 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |

**OCTOBER**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 1 |
| 20 | 0 | 0 | 0 | 3 | 4 | 4 | 2 | 0 | 0 | 0 | 1 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 24 | 0 | -1 | 0 | 3 | 5 | 6 | 3 | 0 | 0 | -1 | 1 | 3 | 4 | 3 | 0 | 0 | -1 | -1 | 1 | 2 | 2 | 0 | 0 | -1 | -2 | -1 | 0 | 0 |
| 28 | 0 | -1 | 0 | 3 | 6 | 7 | 4 | 0 | -1 | -1 | 0 | 2 | 4 | 3 | 0 | -1 | -2 | -3 | -2 | 0 | 0 | 0 | 0 | -2 | -4 | -4 | -3 | -2 |
| 32 | 0 | -1 | -1 | 2 | 5 | 7 | 5 | 0 | -1 | -2 | -2 | 0 | 2 | 2 | 0 | -1 | -3 | -5 | -5 | -3 | -1 | 1 | 0 | -2 | -6 | -8 | -7 | -4 |
| 36 | -1 | -1 | -1 | 0 | 3 | 5 | 3 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 | -1 | -3 | -5 | -7 | -6 | -3 | 1 | 0 | -2 | -6 | -9 | -8 | -5 |
| 40 | -1 | -1 | -2 | -2 | 0 | 1 | 1 | 0 | -1 | -2 | -4 | -4 | -4 | -2 | 0 | -1 | -2 | -5 | -6 | -6 | -3 | 1 | 0 | -2 | -5 | -7 | -7 | -4 |
| 44 | -1 | -1 | -2 | -2 | -2 | -3 | -1 | 0 | -1 | -2 | -3 | -4 | -5 | -3 | 0 | -1 | -2 | -4 | -4 | -5 | -3 | 1 | 0 | -1 | -3 | -4 | -4 | -2 |
| 48 | -1 | -1 | -1 | -2 | -3 | -4 | -2 | 0 | -1 | -2 | -3 | -4 | -5 | -3 | 0 | 0 | -2 | -3 | -3 | -4 | -3 | 1 | 0 | -1 | -3 | -3 | -3 | -2 |
| 52 | 0 | -1 | -1 | -2 | -3 | -4 | -2 | 0 | -1 | -1 | -3 | -3 | -4 | -2 | 0 | 0 | -2 | -3 | -2 | -2 | -2 | 1 | 0 | -1 | -2 | -2 | -1 | -2 |
| 56 | 0 | -1 | -1 | -2 | -4 | -4 | -2 | 0 | -1 | -1 | -2 | -3 | -2 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | -1 | 0 | 1 | 2 | 0 |
| 60 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | -1 | -1 | -1 | -2 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 |
| 64 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 4 | 1 |
| 68 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | 2 | 0 | 0 | 1 | 2 | 2 | 3 | 2 |
| 72 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | 2 | 0 | 1 | 1 | 2 | 2 | 3 | 2 |
| 76 | 0 | 1 | 1 | 0 | 1 | 1 | -1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 3 |
| 80 | 0 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 2 | 3 |

**NOVEMBER**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | 1 | 5 | 6 | 5 | 3 | 1 | 0 | 0 | 3 | 5 | 7 | 4 | 1 | 0 | -1 | 1 | 3 | 6 | 4 | 0 | 0 | -1 | -1 | 1 | 4 | 3 |
| 20 | 0 | -1 | 1 | 6 | 8 | 7 | 4 | 0 | -1 | -1 | 3 | 7 | 8 | 5 | 1 | 0 | -2 | 0 | 4 | 7 | 5 | 1 | 0 | -1 | -1 | 1 | 4 | 4 |
| 24 | -1 | -2 | 1 | 7 | 11 | 10 | 6 | 0 | -2 | -1 | 3 | 8 | 11 | 7 | 0 | -1 | -2 | 0 | 4 | 8 | 6 | 1 | 0 | -2 | -2 | 1 | 3 | 4 |
| 28 | -2 | -3 | 0 | 6 | 11 | 11 | 6 | -1 | -2 | -2 | 3 | 8 | 10 | 6 | 0 | -2 | -3 | -1 | 3 | 5 | 4 | 0 | -1 | -3 | -3 | -2 | 0 | 1 |
| 32 | -2 | -3 | -1 | 4 | 9 | 9 | 6 | -2 | -3 | -3 | 1 | 5 | 6 | 3 | -1 | -2 | -3 | -2 | 0 | 1 | 0 | 0 | -1 | -3 | -3 | -4 | -4 | -3 |
| 36 | -2 | -3 | -2 | 0 | 4 | 5 | 3 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -3 | -4 | -3 | 0 | -1 | 0 | -2 | -4 | -6 | -4 |
| 40 | -2 | -2 | -2 | -3 | -1 | 0 | 0 | -2 | -1 | -1 | -2 | -3 | -4 | -3 | -1 | -1 | 0 | -1 | -4 | -6 | -4 | 0 | 0 | 0 | -1 | -4 | -6 | -3 |
| 44 | -1 | -1 | -2 | -3 | -3 | -2 | -2 | -1 | -1 | -1 | -2 | -4 | -5 | -3 | -1 | 0 | 0 | -1 | -4 | -5 | -4 | 0 | 0 | 0 | -1 | -4 | -5 | -3 |
| 48 | -1 | -1 | -2 | -2 | -2 | -2 | -2 | -1 | 0 | -1 | -2 | -4 | -5 | -4 | 0 | 0 | 0 | -2 | -4 | -5 | -4 | 0 | 0 | -1 | -4 | -6 | -6 | -3 |
| 52 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | -1 | -3 | -5 | -5 | -4 | 0 | 0 | -1 | -3 | -6 | -6 | -4 | 0 | 0 | 0 | -3 | -5 | -5 | -2 |
| 56 | 1 | 1 | -1 | -3 | -4 | -4 | -3 | 0 | 1 | -1 | -4 | -6 | -7 | -5 | 0 | 0 | -1 | -4 | -7 | -7 | -4 | 0 | 0 | 1 | -1 | -2 | -3 | -1 |
| 60 | 1 | 2 | 0 | -3 | -6 | -5 | -3 | 1 | 2 | 0 | -4 | -7 | -7 | -4 | 0 | 1 | 0 | -3 | -5 | -6 | -3 | 0 | 1 | 1 | 0 | 0 | -2 | -1 |
| 64 | 2 | 2 | 1 | -3 | -7 | -5 | -3 | 1 | 2 | 1 | -3 | -6 | -6 | -3 | 1 | 1 | 1 | -2 | -4 | -4 | -2 | 0 | 1 | 1 | 1 | 0 | -2 | -1 |
| 68 | 1 | 1 | 0 | -2 | -6 | -5 | -3 | 1 | 1 | 1 | -2 | -4 | -4 | -3 | 1 | 1 | 1 | 0 | -2 | -3 | -2 | 1 | 1 | 1 | 2 | 2 | 0 | 0 |
| 72 | 1 | 0 | 0 | -2 | -5 | -4 | -2 | 1 | 1 | 1 | -1 | -3 | -3 | -2 | 1 | 1 | 1 | 1 | 0 | -1 | -1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 |
| 76 | 0 | -1 | -1 | -1 | -3 | -4 | -2 | 1 | 0 | 0 | 0 | -1 | -2 | -1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 2 | 1 |
| 80 | -1 | -1 | -1 | -1 | -3 | -3 | -1 | 1 | 0 | 0 | 1 | -1 | -1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 3 | 2 | 1 |

**DECEMBER**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | 0 | 3 | 9 | 11 | 8 | 3 | 0 | 0 | 3 | 8 | 12 | 11 | 5 | 0 | 0 | 2 | 5 | 9 | 10 | 6 | 1 | 0 | 0 | 1 | 4 | 5 | 4 |
| 20 | -1 | -1 | 4 | 11 | 13 | 10 | 4 | 0 | 0 | 3 | 10 | 14 | 13 | 6 | 0 | 0 | 1 | 6 | 10 | 11 | 7 | 1 | -1 | -1 | 0 | 4 | 6 | 5 |
| 24 | -2 | -2 | 4 | 13 | 16 | 13 | 6 | -1 | -2 | 2 | 10 | 16 | 14 | 7 | 0 | -1 | -1 | 4 | 9 | 10 | 6 | 1 | -1 | -4 | -3 | 1 | 3 | 3 |
| 28 | -2 | -2 | 2 | 11 | 14 | 12 | 6 | -1 | -3 | -2 | 5 | 11 | 9 | 4 | -1 | -3 | -5 | -2 | 3 | 4 | 1 | 0 | -2 | -6 | -8 | -5 | -3 | -1 |
| 32 | -1 | -3 | -1 | 6 | 8 | 6 | 4 | -2 | -4 | -5 | -1 | 2 | 0 | 0 | -1 | -4 | -8 | -6 | -6 | -6 | -3 | 0 | -2 | -7 | -12 | -10 | -9 | -5 |
| 36 | -1 | -3 | -3 | -2 | -1 | 0 | 2 | -1 | -4 | -7 | -8 | -8 | -7 | -3 | -1 | -4 | -9 | -12 | -12 | -11 | -6 | 0 | -1 | -6 | -11 | -11 | -10 | -6 |
| 40 | 0 | -2 | -5 | -7 | -7 | -5 | -1 | -1 | -3 | -7 | -11 | -12 | -10 | -4 | -1 | -2 | -7 | -11 | -13 | -11 | -5 | 0 | 0 | -3 | -6 | -8 | -7 | -4 |
| 44 | 0 | -1 | -4 | -8 | -9 | -6 | -2 | 0 | -2 | -5 | -9 | -11 | -9 | -3 | 0 | -1 | -3 | -7 | -9 | -8 | -3 | 0 | 1 | 0 | -2 | -4 | -4 | -3 |
| 48 | 0 | -1 | -4 | -7 | -8 | -4 | -2 | 0 | -1 | -3 | -7 | -9 | -7 | -3 | 0 | 0 | -1 | -4 | -7 | -6 | -3 | 0 | 2 | 1 | 0 | -2 | -4 | -3 |
| 52 | 0 | -1 | -3 | -6 | -6 | -4 | -1 | 1 | 0 | -2 | -5 | -7 | -5 | -2 | 1 | 1 | 0 | -3 | -5 | -5 | -3 | 1 | 2 | 2 | 0 | -2 | -4 | -3 |
| 56 | 1 | 0 | -2 | -5 | -6 | -4 | -1 | 1 | 1 | 0 | -3 | -6 | -4 | -2 | 1 | 2 | 1 | 0 | -3 | -3 | -2 | 1 | 2 | 3 | 4 | 3 | 0 | -1 |
| 60 | 1 | 1 | -2 | -4 | -6 | -3 | -1 | 1 | 2 | 1 | -1 | -3 | -3 | -1 | 1 | 2 | 2 | 4 | 2 | 1 | -1 | 1 | 2 | 3 | 5 | 4 | 2 | 0 |
| 64 | 1 | 1 | -1 | -2 | -4 | -3 | -2 | 1 | 2 | 1 | 1 | -1 | -1 | -1 | 1 | 2 | 2 | 4 | 2 | 2 | 0 | 1 | 2 | 4 | 4 | 3 | 1 | |
| 68 | 0 | 1 | 0 | -1 | -3 | -3 | -2 | 1 | 2 | 1 | 2 | 1 | 0 | -1 | 1 | 2 | 1 | 4 | 3 | 2 | 0 | 0 | 0 | 3 | 4 | 4 | 3 | 1 |
| 72 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | 0 | 1 | 1 | 3 | 2 | 1 | -1 | 0 | 1 | 0 | 3 | 5 | 3 | 1 | 0 | 0 | 2 | 4 | 4 | 2 | |
| 76 | 0 | 0 | 0 | 1 | 0 | -1 | -2 | 0 | 1 | 0 | 3 | 4 | 1 | -1 | 0 | 1 | 0 | 3 | 5 | 3 | 1 | 0 | 0 | 2 | 4 | 4 | 2 | |
| 80 | 0 | 0 | 1 | 2 | 1 | -1 | -2 | 0 | 0 | 0 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 3 | 5 | 3 | 1 | 0 | 0 | -1 | 2 | 4 | 4 | 2 |

N HEMISPHERE                    TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

LONGITUDE 60 W, LONGITUDE 30 W, LONGITUDE 0 DEG, LONGITUDE 30 E — columns by KM LAT = 20 30 40 50 60 70 80 (last column 80DEG)

### SEPTEMBER

| KM | \| | 60W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 0° 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 0 | 0 | 0 | 0 | 1 | 1 | 0 | | 1 | 1 | 0 | 0 | 1 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 20 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | 1 | 1 | 0 | 0 | 1 | 1 | 0 | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| 24 | | 0 | 0 | 0 | 0 | 1 | 1 | 1 | | 1 | 1 | 0 | 0 | 1 | 1 | 0 | | 1 | 1 | 0 | -1 | -1 | 0 | 0 | | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| 28 | | 0 | 0 | 0 | 0 | 1 | 1 | 0 | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 | 1 | 0 | -1 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 32 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 1 | 0 | -1 | -1 | 0 | 0 | | 0 | 1 | 0 | -1 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 36 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 | | 0 | 0 | 0 | -1 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 | | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 44 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 48 | | 0 | 0 | 0 | 0 | -1 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 52 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 1 | 0 | 0 | 1 | | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 56 | | 1 | 0 | 0 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | | 0 | 0 | 0 | 0 | 0 | -1 | -1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 72 | | -1 | 0 | 0 | 0 | 0 | -1 | -1 | | -1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 76 | | -1 | 0 | 0 | 0 | 0 | -1 | -1 | | -1 | -1 | 0 | 0 | 0 | -1 | -1 | | -1 | 0 | 0 | 1 | 1 | 0 | 0 | | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 80 | | -1 | -1 | 0 | 0 | -1 | -1 | -1 | | -2 | -1 | 0 | 0 | 0 | -1 | -1 | | -1 | 0 | 0 | 1 | 1 | 0 | 1 | | 0 | 0 | 0 | 1 | 1 | 1 | 1 |

### OCTOBER

| KM | \| | 60W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 0° 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 0 | 0 | 0 | 0 | 1 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 | 1 | 0 | -1 | -1 | -1 | -1 | | 0 | 0 | 0 | -2 | -3 | -3 | -1 |
| 20 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 | 1 | 0 | -1 | -1 | -1 | -1 | | 1 | 1 | 0 | -1 | -2 | -2 | -2 | | 0 | 1 | 0 | -2 | -4 | -3 | -2 |
| 24 | | 0 | 1 | 0 | -2 | -2 | -2 | -1 | | 1 | 1 | 0 | -2 | -3 | -3 | -2 | | 1 | 1 | 0 | -2 | -4 | -5 | -3 | | 1 | 1 | 0 | -2 | -5 | -5 | -3 |
| 28 | | 1 | 1 | -1 | -4 | -5 | -5 | -3 | | 1 | 1 | 0 | -3 | -6 | -7 | -4 | | 1 | 1 | 1 | -3 | -6 | -7 | -4 | | 0 | 1 | 1 | -1 | -4 | -5 | -3 |
| 32 | | 1 | 1 | -1 | -5 | -9 | -9 | -6 | | 1 | 1 | 0 | -4 | -8 | -9 | -6 | | 1 | 1 | 1 | -2 | -6 | -8 | -5 | | 0 | 1 | 2 | 1 | -2 | -4 | -3 |
| 36 | | 1 | 0 | -1 | -5 | -9 | -9 | -6 | | 1 | 1 | 0 | -4 | -8 | -9 | -5 | | 1 | 1 | -1 | -1 | -5 | -6 | -4 | | 0 | 1 | 2 | 2 | 1 | -1 | -1 |
| 40 | | 1 | 0 | -1 | -4 | -7 | -6 | -4 | | 1 | 1 | 0 | -3 | -6 | -5 | -3 | | 0 | 1 | 1 | 0 | -2 | -3 | -1 | | 0 | 1 | 2 | 3 | 3 | 2 | 1 |
| 44 | | 1 | 0 | -1 | -2 | -4 | -3 | -1 | | 1 | 1 | 0 | -1 | -2 | -2 | 0 | | 0 | 1 | 1 | 1 | 0 | 0 | 1 | | 0 | 1 | 2 | 4 | 4 | 4 | 2 |
| 48 | | 1 | 0 | 0 | -2 | -2 | -1 | -1 | | 1 | 1 | 0 | 0 | -1 | 0 | 1 | | 0 | 1 | 1 | 2 | 1 | 2 | 2 | | 0 | 1 | 2 | 3 | 4 | 4 | 3 |
| 52 | | 1 | 1 | 0 | -1 | -1 | 0 | 0 | | 1 | 1 | 1 | 0 | 0 | 1 | 1 | | 0 | 1 | 2 | 2 | 2 | 2 | 2 | | 0 | 0 | 2 | 3 | 4 | 3 | 2 |
| 56 | | 1 | 1 | 0 | 1 | 1 | 3 | 1 | | 1 | 1 | 1 | 2 | 2 | 4 | 1 | | 1 | 1 | 2 | 2 | 3 | 3 | 2 | | 0 | 0 | 1 | 3 | 3 | 2 | 2 |
| 60 | | 0 | 0 | 1 | 2 | 3 | 4 | 1 | | 1 | 1 | 2 | 2 | 3 | 5 | 1 | | 1 | 1 | 2 | 3 | 3 | 3 | 1 | | 0 | 0 | 1 | 2 | 2 | 1 | 1 |
| 64 | | 0 | 0 | 1 | 2 | 3 | 4 | 1 | | 0 | 0 | 2 | 3 | 3 | 4 | 1 | | 0 | 0 | 1 | 3 | 3 | 3 | 1 | | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 68 | | 0 | 0 | 1 | 2 | 3 | 4 | 1 | | 0 | 0 | 1 | 2 | 3 | 3 | 0 | | 0 | 0 | 1 | 2 | 2 | 2 | 0 | | 0 | 0 | 0 | 0 | 1 | -1 | 0 |
| 72 | | 0 | 0 | 1 | 2 | 2 | 3 | 1 | | -1 | -1 | 1 | 2 | 2 | 3 | 0 | | -1 | -1 | 0 | 1 | 2 | 1 | 0 | | 0 | -1 | -1 | 0 | 0 | -1 | 0 |
| 76 | | -1 | 0 | 1 | 2 | 1 | 2 | 1 | | -1 | -1 | 0 | 1 | 1 | 2 | 0 | | -2 | -2 | 0 | 0 | 1 | 0 | -1 | | -1 | -1 | -1 | -1 | 0 | -1 | 0 |
| 80 | | -1 | 0 | 1 | 1 | 1 | 1 | 1 | | -2 | -1 | 0 | 1 | 1 | 1 | -1 | | -2 | -2 | -1 | 0 | 0 | 0 | -1 | | -1 | -2 | -2 | -1 | -1 | -2 | -1 |

### NOVEMBER

| KM | \| | 60W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 0° 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 0 | 0 | -1 | -1 | 0 | 1 | 1 | | 1 | 1 | -1 | -2 | -1 | -1 | -1 | | 1 | 1 | -1 | -3 | -3 | -4 | -3 | | 0 | 1 | -1 | -4 | -5 | -6 | -4 |
| 20 | | 1 | 1 | -1 | -2 | -1 | 1 | 1 | | 1 | 1 | -1 | -3 | -2 | -2 | -1 | | 1 | 1 | -1 | -4 | -5 | -5 | -4 | | 1 | 1 | -1 | -5 | -7 | -7 | -5 |
| 24 | | 1 | 0 | -2 | -3 | -3 | -1 | 0 | | 1 | 1 | -2 | -5 | -6 | -5 | -3 | | 1 | 2 | -2 | -6 | -9 | -9 | -6 | | 1 | 2 | -1 | -7 | -10 | -10 | -6 |
| 28 | | 1 | 0 | -3 | -5 | -5 | -5 | -3 | | 1 | 1 | -2 | -7 | -9 | -8 | -5 | | 2 | 2 | -2 | -7 | -11 | -10 | -6 | | 2 | 3 | 0 | -6 | -10 | -9 | -5 |
| 32 | | 1 | 0 | -3 | -5 | -7 | -8 | -5 | | 1 | 1 | -2 | -7 | -10 | -9 | -6 | | 2 | 2 | -1 | -6 | -10 | -9 | -5 | | 2 | 3 | 2 | -3 | -6 | -6 | -3 |
| 36 | | 1 | 0 | -2 | -4 | -7 | -8 | -5 | | 1 | 1 | -2 | -5 | -8 | -7 | -4 | | 2 | 2 | 0 | -3 | -6 | -5 | -2 | | 2 | 3 | 3 | 1 | -1 | -1 | 0 |
| 40 | | 0 | 0 | -1 | -3 | -5 | -5 | -3 | | 1 | 1 | 0 | -3 | -5 | -4 | -2 | | 1 | 1 | 1 | 0 | -2 | -2 | 0 | | 1 | 2 | 3 | 3 | 2 | 2 | 2 |
| 44 | | 0 | 0 | 0 | -2 | -4 | -4 | -2 | | 1 | 1 | 1 | -2 | -3 | -3 | -1 | | 1 | 2 | 2 | 1 | -1 | 0 | 1 | | 1 | 2 | 3 | 4 | 4 | 3 | 3 |
| 48 | | 0 | 0 | 0 | -3 | -5 | -4 | -2 | | 1 | 1 | 1 | -2 | -3 | -2 | 0 | | 1 | 2 | 3 | 1 | 0 | 1 | 2 | | 1 | 2 | 3 | 4 | 4 | 4 | 3 |
| 52 | | 0 | 1 | 0 | -3 | -5 | -4 | -1 | | 1 | 1 | 2 | -1 | -2 | -1 | 1 | | 1 | 2 | 3 | 2 | 2 | 2 | 3 | | 0 | 1 | 3 | 5 | 6 | 5 | 4 |
| 56 | | 0 | 0 | 1 | -1 | -2 | -1 | 0 | | 0 | 1 | 2 | 1 | 2 | 2 | 2 | | 0 | 0 | 2 | 3 | 5 | 5 | 3 | | -1 | -1 | 2 | 4 | 7 | 6 | 4 |
| 60 | | 0 | 1 | 1 | 1 | 1 | 0 | 1 | | -1 | 0 | 2 | 4 | 5 | 4 | 2 | | -1 | 0 | 2 | 4 | 7 | 6 | 3 | | -2 | -2 | 0 | 4 | 7 | 7 | 3 |
| 64 | | 0 | 1 | 2 | 3 | 3 | 2 | 1 | | -1 | 0 | 2 | 5 | 6 | 5 | 2 | | -2 | -1 | 1 | 4 | 7 | 7 | 3 | | -2 | -2 | -1 | 3 | 6 | 6 | 2 |
| 68 | | 0 | 1 | 2 | 3 | 4 | 3 | 2 | | -1 | 0 | 2 | 5 | 7 | 5 | 3 | | -1 | 0 | 1 | 4 | 7 | 6 | 3 | | -1 | -1 | -1 | 2 | 5 | 5 | 2 |
| 72 | | 0 | 1 | 2 | 3 | 5 | 3 | 2 | | -1 | 0 | 1 | 4 | 6 | 5 | 2 | | -1 | 0 | 1 | 3 | 6 | 5 | 2 | | 0 | 0 | 0 | 1 | 3 | 4 | 1 |
| 76 | | 0 | 1 | 1 | 3 | 5 | 4 | 2 | | 0 | 0 | 1 | 3 | 5 | 4 | 2 | | 0 | 0 | 1 | 3 | 4 | 4 | 2 | | 1 | 0 | 0 | 1 | 2 | 3 | 1 |
| 80 | | 0 | 0 | 1 | 3 | 5 | 5 | 1 | | 0 | 0 | 1 | 3 | 5 | 4 | 2 | | 0 | 1 | 1 | 2 | 3 | 3 | 2 | | 1 | 1 | 1 | 0 | 1 | 2 | 1 |

### DECEMBER

| KM | \| | 60W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30W 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 0° 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 30E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 1 | -1 | -3 | -3 | -1 | 0 | 1 | | 1 | -1 | -5 | -6 | -5 | -3 | -1 | | 1 | 0 | -4 | -7 | -7 | -5 | -2 | | 1 | 1 | -3 | -8 | -9 | -7 | -3 |
| 20 | | 1 | -1 | -4 | -4 | -2 | 0 | 1 | | 1 | 0 | -5 | -8 | -7 | -5 | -2 | | 2 | 1 | -5 | -9 | -10 | -7 | -4 | | 1 | 2 | -3 | -9 | -11 | -9 | -5 |
| 24 | | 1 | -1 | -5 | -8 | -6 | -4 | -1 | | 2 | 0 | -5 | -10 | -10 | -8 | -4 | | 2 | 2 | -3 | -10 | -12 | -10 | -6 | | 2 | 3 | -1 | -8 | -12 | -11 | -6 |
| 28 | | 1 | 0 | -5 | -10 | -10 | -7 | -3 | | 2 | 2 | -3 | -9 | -11 | -9 | -4 | | 2 | 3 | 0 | -6 | -10 | -9 | -5 | | 1 | 3 | 2 | -3 | -7 | -7 | -4 |
| 32 | | 1 | 1 | -3 | -10 | -11 | -8 | -4 | | 2 | 3 | 1 | -5 | -8 | -6 | -4 | | 1 | 3 | 4 | 0 | -4 | -4 | -3 | | 1 | 3 | 5 | 3 | 1 | -1 | -1 |
| 36 | | 1 | 2 | 0 | -5 | -7 | -6 | -4 | | 1 | 4 | 5 | 1 | -2 | -2 | -2 | | 1 | 3 | 7 | 6 | 3 | 1 | -1 | | 0 | 2 | 6 | 8 | 7 | 4 | 1 |
| 40 | | 1 | 3 | 3 | 0 | -3 | -3 | -3 | | 1 | 4 | 7 | 6 | 2 | 1 | -1 | | 0 | 3 | 8 | 9 | 6 | 3 | 1 | | 0 | 1 | 6 | 10 | 9 | 6 | 2 |
| 44 | | 1 | 3 | 4 | 3 | 1 | -1 | -2 | | 1 | 3 | 6 | 7 | 4 | 2 | 0 | | 0 | 2 | 6 | 8 | 6 | 4 | 2 | | 0 | 0 | 3 | 7 | 8 | 6 | 3 |
| 48 | | 1 | 3 | 4 | 4 | 1 | -1 | -1 | | 1 | 3 | 5 | 6 | 4 | 2 | 0 | | 0 | 2 | 5 | 6 | 5 | 4 | 2 | | 0 | 0 | 2 | 5 | 6 | 5 | 3 |
| 52 | | 0 | 3 | 4 | 3 | 1 | -1 | -2 | | 0 | 2 | 5 | 5 | 3 | 1 | 0 | | 0 | 1 | 3 | 4 | 5 | 4 | 2 | | 0 | 0 | 1 | 3 | 5 | 5 | 3 |
| 56 | | 0 | 2 | 3 | 4 | 3 | 0 | -1 | | 0 | 2 | 3 | 4 | 2 | 1 | 0 | | 0 | 0 | 3 | 3 | 5 | 4 | 2 | | -1 | 0 | 1 | 3 | 5 | 5 | 3 |
| 60 | | 0 | 2 | 3 | 5 | 4 | 2 | 0 | | 0 | 1 | 3 | 4 | 5 | 3 | 1 | | 0 | 0 | 1 | 2 | 4 | 4 | 2 | | -1 | -1 | -1 | 0 | 2 | 3 | 2 |
| 64 | | 0 | 1 | 3 | 4 | 5 | 3 | 1 | | 0 | 1 | 2 | 3 | 5 | 3 | 2 | | 0 | 0 | 1 | 1 | 3 | 3 | 2 | | -1 | -1 | 0 | 0 | 1 | 1 | 1 |
| 68 | | 0 | 1 | 2 | 3 | 4 | 4 | 2 | | 0 | 1 | 2 | 2 | 4 | 4 | 2 | | 0 | 0 | 1 | 1 | 2 | 2 | 1 | | 0 | 0 | 0 | -1 | 0 | 1 | 1 |
| 72 | | 0 | 0 | 1 | 2 | 4 | 4 | 2 | | 0 | 0 | 1 | 1 | 2 | 3 | 2 | | 0 | 1 | 1 | 0 | 1 | 1 | 1 | | 0 | 1 | 0 | -1 | -1 | -1 | 0 |
| 76 | | 0 | 0 | 0 | 1 | 3 | 4 | 2 | | 0 | 0 | 1 | 1 | 2 | 3 | 2 | | 0 | 1 | 1 | 0 | 1 | 1 | 1 | | 0 | 1 | 1 | -1 | -1 | -1 | 0 |
| 80 | | 0 | 0 | 0 | 1 | 3 | 4 | 3 | | 0 | 1 | 1 | 0 | 2 | 3 | 2 | | 0 | 1 | 1 | 0 | 1 | 1 | 1 | | 0 | 1 | 1 | -1 | -1 | -1 | 0 |

75

N HEMISPHERE                    TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

|        | LONGITUDE 60 E | | | | | | | LONGITUDE 90 E | | | | | | | LONGITUDE 120 E | | | | | | | LONGITUDE 150 E | | | | | | |
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

SEPTEMBER

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 20 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 1 | 0 | -1 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 24 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 28 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 36 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 40 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| 44 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 |
| 48 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 |
| 52 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 56 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 60 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| 64 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 76 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 80 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

OCTOBER

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | -2 | -4 | -3 | -2 | -1 | -1 | 0 | -1 | -3 | -3 | -1 | -1 | -1 | 0 | 1 | 0 | -1 | 0 | 0 | -1 | 0 | 2 | 2 | 1 | 0 |
| 20 | 0 | 0 | 0 | -2 | -4 | -4 | -2 | -1 | -1 | 0 | -1 | -2 | -3 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 3 | 3 | 2 | 1 |
| 24 | 0 | 0 | 0 | -1 | -3 | -4 | -2 | -1 | -1 | 1 | 1 | 0 | -1 | 1 | -1 | -1 | 1 | 3 | 3 | 2 | 1 | -1 | -1 | 1 | 4 | 6 | 5 | 3 |
| 28 | 0 | 0 | 2 | 1 | 0 | -1 | -1 | -1 | -1 | 2 | 4 | 4 | 3 | 2 | -1 | -1 | 1 | 6 | 8 | 7 | 4 | -1 | -1 | 1 | 5 | 8 | 8 | 5 |
| 32 | 0 | 1 | 3 | 4 | 4 | 2 | 1 | -1 | 0 | 3 | 6 | 9 | 8 | 4 | -1 | 0 | 2 | 7 | 11 | 11 | 6 | -1 | -1 | 0 | 4 | 9 | 10 | 6 |
| 36 | 0 | 1 | 3 | 6 | 7 | 5 | 3 | -1 | 0 | 3 | 7 | 11 | 11 | 6 | -1 | 0 | 2 | 7 | 12 | 13 | 7 | -1 | -1 | 0 | 1 | 5 | 6 | 3 |
| 40 | 0 | 1 | 3 | 6 | 8 | 7 | 3 | 0 | 1 | 2 | 7 | 10 | 10 | 5 | 0 | 0 | 1 | 3 | 5 | 5 | 2 | -1 | -1 | -1 | 0 | 1 | 1 | 1 |
| 44 | 0 | 1 | 2 | 5 | 7 | 6 | 3 | 0 | 0 | 2 | 5 | 7 | 7 | 3 | -1 | 0 | 0 | 2 | 3 | 3 | 1 | -1 | -1 | 0 | -1 | -1 | -1 | 0 |
| 48 | 0 | 0 | 2 | 4 | 6 | 6 | 3 | 0 | 0 | 1 | 3 | 5 | 6 | 2 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | -1 | -1 | -2 | -1 |
| 52 | 0 | 0 | 1 | 3 | 5 | 4 | 2 | -1 | 0 | 1 | 2 | 4 | 4 | 1 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | -1 | 0 | -1 | -2 | -3 | -4 | -1 |
| 56 | 0 | 0 | 1 | 2 | 3 | 1 | 1 | -1 | 0 | 0 | 1 | 1 | -1 | 0 | -1 | 0 | -1 | -1 | -1 | -3 | -1 | 0 | 0 | -1 | -3 | -4 | -4 | -2 |
| 60 | 0 | 0 | 0 | 1 | 1 | -2 | 0 | 0 | 0 | 0 | -1 | -1 | -4 | -1 | 0 | 0 | -2 | -3 | -4 | -5 | -2 | 0 | 0 | -2 | -3 | -4 | -4 | -2 |
| 64 | 0 | 0 | 0 | 0 | -1 | -3 | 0 | 0 | 0 | -1 | -2 | -3 | -5 | -1 | 0 | 0 | -2 | -3 | -4 | -5 | -2 | 0 | 0 | -1 | -2 | -3 | -3 | -2 |
| 68 | 0 | 0 | -1 | -1 | -1 | -4 | 0 | 0 | 0 | -1 | -3 | -3 | -5 | -1 | 0 | 0 | -1 | -2 | -3 | -4 | -2 | 0 | 0 | 0 | -1 | -2 | -2 | -2 |
| 72 | 0 | -1 | -1 | -2 | -2 | -4 | 0 | 1 | -1 | -2 | -2 | -3 | -5 | -1 | 0 | 0 | -1 | -1 | -2 | -3 | -2 | 0 | 0 | 0 | -1 | -1 | -1 | -2 |
| 76 | 0 | -1 | -2 | -2 | -2 | -3 | 0 | 1 | -1 | -2 | -2 | -3 | -4 | -1 | 0 | -1 | -1 | -1 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 3 | 0 | -2 |
| 80 | 0 | -1 | -2 | -2 | -2 | -3 | 0 | 1 | -1 | -2 | -2 | -2 | -3 | 0 | 0 | -1 | -1 | -1 | -2 | -2 | -2 |  |  |  |  |  |  |  |

NOVEMBER

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | -4 | -6 | -7 | -4 | -1 | 0 | 1 | -1 | -4 | -5 | -3 | -1 | -1 | 2 | 3 | 0 | -2 | -2 | -1 | -1 | 2 | 5 | 4 | 2 | 0 |
| 20 | 0 | 1 | 0 | -4 | -7 | -8 | -5 | -1 | 0 | 2 | -1 | -4 | -6 | -4 | -2 | -1 | 3 | 4 | 1 | -2 | -2 | -1 | -1 | 3 | 6 | 6 | 3 | 1 |
| 24 | 0 | 2 | 1 | -4 | -8 | -9 | -6 | -1 | 1 | 3 | 1 | -3 | -5 | -4 | -2 | -1 | 4 | 6 | 4 | 1 | -1 | -2 | -2 | 3 | 8 | 9 | 7 | 3 |
| 28 | 1 | 3 | 3 | -1 | -5 | -6 | -3 | 0 | 2 | 5 | 4 | 2 | 0 | -1 | -1 | 0 | 4 | 8 | 8 | 5 | 2 | -2 | -2 | 1 | 7 | 11 | 11 | 6 |
| 32 | 1 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 5 | 7 | 7 | 5 | 3 | -1 | 0 | 4 | 8 | 10 | 9 | 5 | -2 | -2 | -1 | 3 | 8 | 9 | 5 |
| 36 | 1 | 3 | 4 | 5 | 5 | 4 | 3 | 1 | 1 | 4 | 7 | 9 | 9 | 5 | 0 | 0 | 2 | 6 | 10 | 10 | 6 | -2 | -2 | -1 | 3 | 3 | 3 | 3 |
| 40 | 1 | 2 | 3 | 6 | 7 | 6 | 4 | 1 | 1 | 2 | 5 | 9 | 9 | 5 | -1 | -1 | -2 | 0 | 5 | 6 | 3 | -1 | -2 | -3 | -2 | 1 | 2 | 1 |
| 44 | 1 | 1 | 2 | 5 | 7 | 6 | 4 | 0 | 0 | 0 | 4 | 8 | 7 | 4 | -1 | -2 | -2 | 0 | 5 | 5 | 2 | -1 | -2 | -3 | -2 | 1 | 2 | 0 |
| 48 | 0 | 0 | 2 | 5 | 7 | 6 | 4 | 0 | -1 | 0 | 4 | 7 | 7 | 4 | 0 | -2 | -2 | 1 | 5 | 5 | 2 | 0 | -1 | -2 | -1 | 1 | 2 | 0 |
| 52 | 0 | 0 | 2 | 5 | 8 | 7 | 4 | 0 | -2 | 0 | 4 | 8 | 7 | 4 | 1 | -1 | -1 | 1 | 3 | 3 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 |
| 56 | -1 | -2 | 0 | 4 | 7 | 6 | 4 | 0 | -2 | -1 | 3 | 6 | 5 | 3 | 1 | 0 | -2 | -1 | -1 | 0 | 0 | 2 | 1 | -1 | -2 | -4 | -3 | -2 |
| 60 | -1 | -3 | -1 | 2 | 5 | 5 | 3 | 0 | -2 | -2 | 1 | 3 | 3 | 2 | 1 | 0 | -2 | -3 | -3 | -2 | 0 | 1 | 0 | -1 | -3 | -6 | -4 | -2 |
| 64 | -2 | -3 | -2 | 0 | 3 | 4 | 2 | 0 | -2 | -3 | -2 | 0 | 1 | 1 | 0 | -1 | -2 | -3 | -5 | -3 | -1 | 1 | 0 | -1 | -3 | -6 | -5 | -2 |
| 68 | -1 | -2 | -2 | -1 | 1 | 2 | 1 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | -1 | -1 | -2 | -4 | -5 | -4 | -1 | 0 | -1 | -1 | -3 | -6 | -5 | -2 |
| 72 | 0 | -1 | -1 | -2 | 0 | 1 | 0 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | -1 | -1 | -2 | -4 | -5 | -5 | -2 | -1 | -2 | -2 | -3 | -5 | -5 | -2 |
| 76 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | -1 | -1 | -2 | -4 | -4 | -3 | -1 | -1 | -1 | -2 | -4 | -5 | -5 | -2 | -2 | -2 | -2 | -3 | -4 | -4 | -2 |
| 80 | 1 | 1 | 0 | -2 | -2 | -1 | 0 | -1 | 0 | -1 | -3 | -4 | -3 | -1 | -2 | -2 | -2 | -4 | -5 | -4 | -2 | -2 | -2 | -2 | -3 | -4 | -4 | -2 |

DECEMBER

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 0 | -6 | -10 | -8 | -4 | -1 | 0 | 1 | -3 | -7 | -8 | -4 | -2 | -1 | 3 | 2 | -2 | -4 | -3 | -1 | -1 | 3 | 7 | 6 | 2 | -1 |
| 20 | 0 | 2 | 0 | -6 | -11 | -10 | -5 | -1 | 1 | 2 | -2 | -8 | -9 | -5 | -2 | -1 | 3 | 4 | -1 | -4 | -3 | -2 | -1 | 4 | 8 | 8 | 3 | 0 |
| 24 | 0 | 3 | 2 | -4 | -10 | -9 | -5 | -1 | 1 | 4 | 1 | -4 | -6 | -3 | -2 | 0 | 5 | 7 | 4 | 0 | 0 | -2 | -1 | 4 | 11 | 13 | 11 | 6 |
| 28 | 1 | 3 | 4 | 1 | -3 | -3 | -2 | 0 | 1 | 5 | 5 | 3 | 2 | 1 | -1 | 0 | 5 | 9 | 8 | 7 | 4 | -1 | -1 | 2 | 9 | 11 | 10 | 6 |
| 32 | 0 | 2 | 5 | 6 | 6 | 4 | 1 | 0 | 1 | 4 | 8 | 9 | 9 | 4 | 0 | 0 | 4 | 9 | 11 | 11 | 7 | 0 | -1 | 0 | 4 | 6 | 7 | 5 |
| 36 | 0 | 1 | 4 | 9 | 11 | 8 | 3 | 0 | 0 | 2 | 8 | 12 | 11 | 5 | 0 | 0 | -1 | 3 | 7 | 8 | 4 | 0 | -1 | -2 | -2 | 0 | 2 | 3 |
| 40 | 0 | -1 | 2 | 8 | 11 | 8 | 4 | 0 | -1 | 0 | 6 | 11 | 10 | 5 | 0 | -1 | -2 | 0 | 3 | 4 | 2 | 0 | -1 | -3 | -4 | -3 | -1 | 0 |
| 44 | 0 | -1 | 0 | 5 | 9 | 7 | 3 | 0 | -1 | -1 | 3 | 7 | 7 | 3 | 0 | -1 | -2 | -1 | 1 | 2 | 1 | 0 | -2 | -3 | -4 | -4 | -2 | -1 |
| 48 | -1 | -1 | 0 | 3 | 6 | 6 | 3 | -1 | -2 | -2 | 1 | 5 | 5 | 2 | -1 | -3 | -4 | -2 | 1 | 2 | 0 | 0 | -2 | -4 | -4 | -3 | -1 | 0 |
| 52 | -1 | -2 | -1 | 3 | 6 | 6 | 3 | -1 | -3 | -3 | 1 | 4 | 4 | 2 | -1 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -4 | -5 | -4 | -2 | -1 |
| 56 | -1 | -2 | -1 | 2 | 4 | 4 | 2 | -1 | -3 | -3 | -1 | 2 | 2 | 1 | -1 | -3 | -4 | -5 | -4 | -2 | -1 | 0 | -1 | -3 | -6 | -6 | -3 | -1 |
| 60 | -1 | -2 | -2 | 0 | 2 | 2 | 2 | -1 | -3 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -3 | -6 | -6 | -4 | -1 | 0 | 0 | -2 | -5 | -6 | -4 | -2 |
| 64 | -1 | -2 | -2 | -2 | 0 | 0 | 1 | -1 | -3 | -3 | -4 | -3 | -2 | 0 | 0 | -2 | -2 | -5 | -6 | -5 | -2 | 0 | 0 | -1 | -4 | -5 | -4 | -2 |
| 68 | -1 | -2 | -2 | -3 | -2 | -1 | 0 | -1 | -2 | -2 | -5 | -5 | -3 | -1 | 0 | -2 | -1 | -4 | -6 | -5 | -2 | 0 | -1 | -1 | -3 | -5 | -4 | -2 |
| 72 | 0 | -1 | -1 | -3 | -4 | -3 | -1 | 0 | -1 | -1 | -4 | -6 | -4 | -1 | 0 | -2 | -1 | -4 | -6 | -5 | -2 | 0 | -1 | 0 | -2 | -3 | -3 | -2 |
| 76 | 0 | 0 | -1 | -3 | -4 | -3 | -1 | 0 | -1 | -1 | -4 | -6 | -4 | -1 | 0 | -2 | -1 | -3 | -6 | -4 | -2 | 0 | -1 | 0 | -1 | -3 | -3 | -2 |
| 80 | 0 | 0 | 0 | -2 | -4 | -3 | -1 | 0 | -1 | -1 | -3 | -6 | -4 | -2 | 0 | -2 | -1 | -3 | -6 | -4 | -2 | 0 | -1 | 0 | -1 | -3 | -3 | -2 |

TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

| | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**JANUARY**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 5 | 10 | 15 | 16 | 9 | 0 | 1 | 3 | 7 | 11 | 14 | 9 | 0 | 0 | 0 | 2 | 4 | 7 | 6 | 0 | -1 | -2 | -2 | -3 | -2 | 1 |
| 20 | -1 | 1 | 5 | 12 | 18 | 20 | 11 | 0 | 1 | 3 | 8 | 13 | 16 | 10 | 0 | 0 | 0 | 1 | 4 | 7 | 6 | 0 | -1 | -3 | -3 | -4 | -2 | 1 |
| 24 | -1 | 0 | 5 | 12 | 19 | 20 | 12 | 0 | 0 | 2 | 7 | 12 | 16 | 10 | 0 | -1 | -2 | -1 | 2 | 6 | 5 | 0 | -2 | -4 | -5 | -5 | -4 | -1 |
| 28 | -1 | -1 | 2 | 8 | 14 | 14 | 8 | -1 | -2 | -1 | 2 | 6 | 8 | 5 | 0 | -2 | -4 | -4 | -2 | 1 | 1 | 0 | -2 | -5 | -6 | -5 | -4 | -2 |
| 32 | -1 | -2 | -2 | 2 | 5 | 5 | 3 | -1 | -3 | -5 | -4 | -1 | 0 | 0 | -1 | -3 | -6 | -7 | -5 | -4 | -2 | 0 | -1 | -4 | -6 | -5 | -4 | -3 |
| 36 | -1 | -3 | -5 | -5 | -4 | -4 | -1 | -1 | -4 | -8 | -9 | -9 | -8 | -4 | -1 | -3 | -7 | -9 | -8 | -7 | -5 | 0 | 0 | -3 | -4 | -3 | -4 | -4 |
| 40 | -1 | -3 | -7 | -10 | -12 | -9 | -3 | -1 | -4 | -8 | -12 | -13 | -12 | -5 | -1 | -2 | -6 | -8 | -8 | -8 | -5 | 0 | 0 | -1 | -2 | -2 | -3 | -4 |
| 44 | -1 | -3 | -7 | -11 | -13 | -11 | -4 | -1 | -3 | -6 | -11 | -13 | -12 | -5 | 0 | -1 | -3 | -6 | -7 | -7 | -4 | 0 | 1 | 0 | -1 | -1 | -2 | -3 |
| 48 | 0 | -2 | -5 | -8 | -12 | -11 | -5 | 0 | -2 | -4 | -8 | -11 | -10 | -4 | 0 | -1 | -2 | -5 | -6 | -5 | -3 | 1 | 1 | 1 | 0 | 0 | 0 | -1 |
| 52 | -1 | -2 | -3 | -6 | -9 | -9 | -5 | 0 | -1 | -3 | -6 | -9 | -7 | -4 | 0 | 0 | -1 | -3 | -4 | -2 | -1 | 1 | 1 | 1 | 2 | 2 | 3 | 1 |
| 56 | -1 | -1 | -1 | -5 | -8 | -8 | -5 | 0 | 0 | 0 | -3 | -6 | -4 | -3 | 0 | 1 | 1 | 1 | 0 | 1 | -1 | 1 | 1 | 1 | 4 | 5 | 5 | 3 |
| 60 | 0 | 0 | 0 | -3 | -6 | -6 | -5 | 0 | 1 | 2 | 0 | -2 | -2 | -3 | 0 | 2 | 2 | 4 | 3 | 3 | 0 | 1 | 1 | 2 | 5 | 7 | 6 | 4 |
| 64 | 0 | 0 | 0 | -1 | -4 | -4 | -4 | 0 | 1 | 2 | 2 | 1 | 0 | -2 | 0 | 2 | 2 | 5 | 5 | 4 | 1 | 0 | 1 | 2 | 5 | 8 | 6 | 4 |
| 68 | 0 | 0 | 0 | 1 | -1 | -1 | -2 | 0 | 1 | 1 | 4 | 3 | 2 | -1 | 0 | 1 | 1 | 5 | 6 | 4 | 1 | 0 | 1 | 1 | 4 | 6 | 6 | 4 |
| 72 | 0 | 0 | 0 | 2 | 1 | 0 | -1 | 0 | 1 | 0 | 4 | 4 | 3 | 0 | 0 | 1 | 1 | 4 | 6 | 4 | 2 | 0 | 0 | 1 | 3 | 5 | 4 | 3 |
| 76 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 4 | 5 | 3 | 1 | 0 | 0 | 0 | 4 | 5 | 3 | 2 | 0 | 0 | 0 | 2 | 3 | 3 | 2 |
| 80 | 0 | 0 | -1 | 3 | 4 | 3 | 1 | 0 | 0 | -1 | 4 | 5 | 3 | 2 | 0 | 0 | -1 | 3 | 5 | 3 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 2 |

**FEBRUARY**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | 0 | 3 | 6 | 11 | 9 | 4 | 0 | 1 | 1 | 5 | 10 | 10 | 7 | 1 | 1 | 0 | 3 | 6 | 8 | 7 | 1 | 0 | -1 | 1 | 0 | 4 | 4 |
| 20 | -3 | 0 | 1 | 6 | 13 | 12 | 4 | -2 | 0 | 2 | 5 | 12 | 12 | 9 | 0 | 1 | 2 | 3 | 6 | 9 | 10 | 2 | 0 | 1 | 1 | -1 | 3 | 6 |
| 24 | -1 | 1 | 5 | 8 | 12 | 12 | 7 | 0 | 0 | 2 | 6 | 10 | 13 | 7 | 1 | -2 | -1 | 2 | 4 | 8 | 6 | 1 | -2 | -3 | -2 | 0 | 2 | 3 |
| 28 | 0 | 0 | 2 | 7 | 10 | 8 | 5 | -1 | 0 | 1 | 4 | 5 | 6 | 3 | -1 | -1 | -1 | 0 | 0 | 3 | 1 | 0 | -1 | -2 | -4 | -2 | 0 | 0 |
| 32 | 1 | -2 | -3 | 0 | 3 | 2 | 3 | 0 | -1 | -3 | -3 | -1 | -1 | -1 | -1 | 0 | -1 | -3 | -4 | -3 | -3 | -1 | 1 | 0 | -3 | -5 | -3 | -2 |
| 36 | 0 | -2 | -4 | -4 | -3 | -3 | -1 | -1 | -2 | -3 | -6 | -7 | -7 | -4 | -1 | 0 | -2 | -4 | -6 | -7 | -4 | 0 | 0 | -1 | -3 | -4 | -4 | -2 |
| 40 | 1 | 0 | -5 | -6 | -9 | -8 | -4 | 0 | 0 | -4 | -5 | -10 | -11 | -5 | -1 | -1 | -1 | -4 | -6 | -8 | -3 | -1 | -2 | 0 | -3 | -3 | -4 | -2 |
| 44 | 0 | -1 | -3 | -5 | -6 | -7 | -2 | 0 | -1 | -3 | -5 | -9 | -9 | -4 | 0 | -1 | -3 | -4 | -8 | -7 | -4 | 0 | 0 | -1 | -3 | -4 | -4 | -4 |
| 48 | 0 | -2 | -2 | -3 | -7 | -7 | -3 | 0 | -2 | -2 | -4 | -7 | -7 | -4 | 0 | -1 | -2 | -3 | -4 | -6 | -3 | 0 | 0 | -1 | -2 | -2 | -3 | -2 |
| 52 | -1 | -1 | -1 | -3 | -6 | -7 | -3 | 0 | -1 | -1 | -3 | -6 | -6 | -3 | 0 | -1 | -1 | -2 | -4 | -5 | -2 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| 56 | -1 | 0 | 0 | -3 | -6 | -7 | -3 | 0 | 0 | 0 | -2 | -5 | -5 | -2 | 0 | 0 | 1 | 0 | -2 | -3 | -2 | 0 | -1 | 0 | 1 | 1 | 1 | 0 |
| 60 | 0 | 0 | 0 | -3 | -6 | -6 | -3 | 0 | 1 | 1 | -1 | -3 | -4 | -2 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 3 | 3 | 3 | 0 |
| 64 | 0 | 1 | 0 | -2 | -5 | -5 | -3 | 1 | 2 | 2 | 0 | -2 | -2 | -2 | 1 | 1 | 2 | 2 | 2 | 1 | -1 | 0 | 0 | 1 | 3 | 5 | 4 | 1 |
| 68 | 1 | 1 | 0 | -1 | -3 | -4 | -3 | 1 | 2 | 2 | 1 | 0 | -1 | -2 | 1 | 2 | 2 | 3 | 3 | 2 | 0 | 0 | 1 | 1 | 3 | 5 | 5 | 1 |
| 72 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | 1 | 1 | 1 | 2 | 1 | 0 | -1 | 1 | 1 | 1 | 3 | 3 | 3 | 0 | 0 | 1 | 1 | 3 | 5 | 5 | 2 |
| 76 | 0 | 0 | 0 | 1 | 0 | -1 | -3 | 1 | 1 | 1 | 2 | 2 | 1 | -1 | 1 | 1 | 1 | 2 | 4 | 3 | 0 | 0 | 1 | 1 | 2 | 4 | 4 | 2 |
| 80 | 0 | 0 | 0 | 1 | 1 | 0 | -2 | 0 | 0 | 0 | 2 | 3 | 2 | -1 | 1 | 1 | 1 | 2 | 4 | 3 | 0 | 0 | 1 | 1 | 2 | 4 | 4 | 2 |

**MARCH**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 3 | 6 | 8 | 8 | 6 | 0 | 0 | 2 | 5 | 8 | 9 | 6 | 0 | 0 | 1 | 4 | 7 | 8 | 5 | 0 | 0 | 0 | 3 | 5 | 6 | 4 |
| 20 | -1 | 0 | 3 | 7 | 9 | 10 | 6 | 0 | 0 | 2 | 6 | 9 | 10 | 7 | 0 | 0 | 1 | 4 | 8 | 9 | 6 | 1 | 0 | 0 | 3 | 6 | 6 | 4 |
| 24 | -1 | 0 | 3 | 7 | 10 | 9 | 5 | 0 | 0 | 1 | 5 | 9 | 9 | 6 | 0 | 0 | 0 | 3 | 7 | 8 | 5 | 0 | 0 | -1 | 1 | 5 | 6 | 3 |
| 28 | -1 | -1 | 0 | 4 | 6 | 6 | 3 | 0 | -1 | -1 | 2 | 5 | 5 | 3 | 0 | -1 | -2 | 0 | 3 | 4 | 3 | 0 | -1 | -2 | -1 | 1 | 2 | 1 |
| 32 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | -1 | 0 | -2 | -3 | -4 | -3 | -2 | -1 | 0 | -1 | -3 | -5 | -4 | -3 | -1 |
| 36 | -1 | -2 | -4 | -5 | -5 | -5 | -4 | -1 | -2 | -4 | -7 | -8 | -7 | -4 | -1 | -2 | -4 | -7 | -8 | -7 | -4 | 0 | -1 | -3 | -6 | -8 | -7 | -3 |
| 40 | 0 | -2 | -5 | -7 | -8 | -8 | -6 | -1 | -2 | -4 | -8 | -10 | -10 | -7 | -1 | -1 | -3 | -7 | -10 | -10 | -6 | 0 | -1 | -2 | -6 | -9 | -8 | -5 |
| 44 | 0 | -1 | -4 | -6 | -8 | -8 | -5 | -1 | -1 | -3 | -7 | -9 | -10 | -6 | 0 | -1 | -3 | -6 | -9 | -9 | -5 | 0 | 0 | -1 | -5 | -7 | -7 | -4 |
| 48 | 0 | -1 | -2 | -5 | -7 | -7 | -4 | 0 | -1 | -2 | -6 | -8 | -8 | -4 | 0 | -1 | -2 | -5 | -7 | -7 | -4 | 0 | 0 | -1 | -3 | -4 | -4 | -3 |
| 52 | 0 | -1 | -2 | -5 | -7 | -7 | -4 | 0 | -1 | -2 | -5 | -8 | -7 | -4 | 0 | -1 | -1 | -4 | -5 | -5 | -3 | 0 | 0 | 0 | -1 | -1 | -2 | -1 |
| 56 | 0 | 0 | -2 | -5 | -8 | -8 | -5 | 0 | 0 | -1 | -4 | -7 | -6 | -3 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 |
| 60 | 0 | 0 | -1 | -4 | -7 | -7 | -4 | 0 | 0 | -1 | -2 | -4 | -4 | -3 | 0 | 1 | 1 | 0 | -1 | -1 | | 0 | 0 | 1 | 3 | 3 | 2 | 1 |
| 64 | 0 | 1 | -1 | -2 | -4 | -5 | -4 | 1 | 1 | 0 | 0 | -2 | -2 | -2 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 4 | 4 | 3 | 2 |
| 68 | 0 | 1 | -1 | -1 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 0 | -1 | -1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 3 | 3 | 3 | 2 |
| 72 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 |
| 76 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 80 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

**APRIL**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 |
| 20 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 |
| 24 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | -1 | -2 | -1 | 0 | 1 |
| 28 | 0 | 0 | -1 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -2 | -1 | 0 | 0 |
| 32 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 36 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| 40 | 0 | 0 | -1 | -3 | -2 | -1 | 0 | 0 | 0 | -1 | -3 | -2 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -. | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| 44 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 0 | 0 | 0 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 56 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 60 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 64 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 68 | 0 | -1 | 0 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | 0 |
| 76 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | -1 | 0 |
| 80 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | -1 | 1 | 1 | 0 | 1 | 0 | -1 | -1 |

TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

| | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**JANUARY**

| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -3 | -4 | -6 | -7 | -3 | 0 | -1 | -3 | -4 | -6 | -8 | -5 | 1 | 0 | -3 | -5 | -7 | -8 | -6 | 1 | 1 | -3 | -7 | -10 | -10 | -7 |
| 20 | 0 | -2 | -4 | -5 | -7 | -8 | -4 | 0 | -1 | -3 | -5 | -8 | -10 | -7 | 1 | 0 | -3 | -6 | -9 | -11 | -8 | 1 | 1 | -3 | -8 | -12 | -12 | -8 |
| 24 | 0 | -1 | -4 | -6 | -8 | -9 | -5 | 1 | 0 | -2 | -5 | -9 | -11 | -8 | 1 | 1 | -1 | -6 | -11 | -13 | -9 | 1 | 2 | -1 | -7 | -12 | -13 | -9 |
| 28 | 1 | 0 | -2 | -5 | -6 | -7 | -5 | 1 | 2 | 0 | -3 | -7 | -9 | -6 | 1 | 2 | 1 | -3 | -8 | -10 | -6 | 1 | 2 | 1 | -3 | -8 | -8 | -5 |
| 32 | 1 | 1 | 0 | -3 | -4 | -4 | -4 | 1 | 3 | 3 | 0 | -4 | -5 | -4 | 1 | 3 | 4 | 1 | 1 | 5 | -3 | 1 | 2 | 4 | 2 | -1 | -2 | -1 |
| 36 | 1 | 2 | 2 | 0 | 0 | -1 | -2 | 1 | 3 | 5 | 3 | 0 | -1 | -1 | 1 | 3 | 6 | 4 | 1 | 0 | 0 | 0 | 2 | 5 | 6 | 4 | 3 | 2 |
| 40 | 1 | 3 | 3 | 2 | 2 | 0 | -2 | 1 | 3 | 6 | 5 | 3 | 2 | 0 | 0 | 2 | 6 | 6 | 4 | 3 | 2 | 0 | 1 | 5 | 8 | 8 | 7 | 4 |
| 44 | 1 | 2 | 3 | 4 | 3 | 2 | -1 | 0 | 2 | 5 | 5 | 5 | 4 | 1 | 0 | 1 | 4 | 6 | 6 | 6 | 4 | 0 | 0 | 4 | 7 | 8 | 8 | 6 |
| 48 | 1 | 2 | 3 | 4 | 5 | 4 | 1 | 0 | 1 | 3 | 5 | 6 | 6 | 3 | 0 | 0 | 2 | 5 | 7 | 7 | 5 | 0 | 0 | 2 | 5 | 7 | 8 | 6 |
| 52 | 0 | 2 | 2 | 4 | 6 | 5 | 3 | 0 | 1 | 2 | 5 | 6 | 6 | 4 | 0 | 0 | 1 | 4 | 5 | 6 | 5 | 0 | -1 | 1 | 2 | 4 | 6 | 5 |
| 56 | 0 | 1 | 1 | 5 | 8 | 7 | 5 | 0 | 0 | 0 | 4 | 6 | 6 | 5 | 0 | -1 | 0 | 1 | 3 | 5 | 4 | 0 | 1 | 0 | 0 | 1 | 4 | 2 |
| 60 | 0 | 0 | 0 | 4 | 8 | 7 | 6 | 0 | -1 | -1 | 2 | 5 | 6 | 5 | 0 | -1 | -1 | -1 | 1 | 4 | 3 | 0 | -1 | -1 | -2 | -1 | 1 | 1 |
| 64 | 0 | 0 | 0 | 3 | 6 | 6 | 5 | 0 | -1 | -1 | 0 | 3 | 5 | 4 | 0 | -1 | -1 | -2 | 0 | 2 | 2 | 0 | -1 | -1 | -2 | -2 | -1 | -1 |
| 68 | 0 | 0 | 0 | 2 | 4 | 5 | 4 | 0 | 0 | 0 | -1 | 1 | 3 | 3 | 0 | 0 | 0 | -2 | -2 | 0 | 1 | 0 | 0 | 0 | -2 | -3 | -2 | -2 |
| 72 | 0 | 0 | 1 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | -1 | 0 | 2 | 2 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -3 | -3 | -2 |
| 76 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 0 | 1 | 1 | -2 | -1 | 0 | 0 | 0 | 1 | 1 | -2 | -3 | -2 | -1 | 0 | 1 | 0 | -2 | -4 | -3 | -2 |
| 80 | 0 | 0 | 1 | -1 | 0 | 1 | 1 | 0 | 1 | 2 | -2 | -2 | -1 | -1 | 1 | 2 | 1 | -2 | -3 | -3 | -2 | 0 | 1 | 1 | -2 | -3 | -4 | -2 |

**FEBRUARY**

| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | -1 | -1 | -1 | -3 | 0 | 0 | 0 | -1 | -1 | -3 | -2 | -3 | -4 | 0 | 0 | -2 | -4 | -2 | -5 | -6 | 0 | 1 | -2 | -5 | -5 | -8 | -5 |
| 20 | 2 | -1 | -2 | -1 | -4 | -1 | -1 | 1 | -1 | -4 | -3 | -3 | -4 | -6 | -1 | -1 | -4 | -5 | -3 | -7 | -8 | -1 | 0 | -2 | -6 | -6 | -10 | -6 |
| 24 | 0 | 0 | -3 | -4 | -3 | -3 | -1 | -1 | 1 | -2 | -5 | -4 | -6 | -4 | 0 | 2 | 0 | -5 | -6 | -8 | -7 | 1 | 0 | -0 | -5 | -9 | -10 | -8 |
| 28 | 1 | 0 | -3 | -5 | -4 | -3 | -1 | 1 | 0 | -3 | -5 | -5 | -6 | -2 | 1 | 1 | -1 | -4 | -7 | -7 | -4 | 0 | 1 | 0 | -3 | -7 | -7 | -5 |
| 32 | 0 | 0 | -1 | -3 | -6 | -3 | 0 | 1 | 1 | -2 | -5 | -6 | -4 | 0 | 1 | -1 | -2 | -5 | -4 | -5 | -2 | 0 | 1 | 1 | -1 | -1 | -3 | -4 |
| 36 | 1 | 0 | -1 | -3 | -4 | -2 | -1 | 1 | 0 | -1 | -3 | -5 | -3 | -2 | 1 | 0 | 1 | -2 | -4 | -3 | -2 | 0 | 1 | 3 | 3 | 2 | 1 | 0 |
| 40 | 0 | -1 | 0 | -3 | -3 | -2 | -2 | 1 | 1 | 0 | -2 | -3 | -1 | -1 | 1 | 3 | 1 | 2 | -2 | 0 | 0 | 0 | 2 | 3 | 6 | 5 | 4 | 3 |
| 44 | 0 | 0 | 0 | -2 | -1 | -2 | -1 | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 3 | 3 | 2 | 2 | 0 | 1 | 3 | 5 | 5 | 6 | 3 |
| 48 | 0 | 1 | -1 | -1 | 0 | -1 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 3 | 1 | 1 | 3 | 4 | 6 | 7 | 3 |
| 52 | 0 | -1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 5 | 5 | 2 | 1 | 1 | 0 | 2 | 7 | 7 | 4 | 1 | 1 | 1 | 3 | 6 | 7 | 4 |
| 56 | 0 | -1 | -1 | 1 | 5 | 5 | 2 | 0 | -1 | 1 | 2 | 7 | 7 | 3 | 0 | 0 | 0 | 3 | 8 | 7 | 4 | 1 | 1 | 1 | 3 | 6 | 6 | 3 |
| 60 | 0 | -2 | 0 | 3 | 7 | 6 | 2 | -1 | -2 | -1 | 4 | 9 | 8 | 4 | 0 | -1 | 0 | 4 | 8 | 7 | 4 | 0 | 1 | 1 | 3 | 4 | 4 | 3 |
| 64 | -1 | -1 | 0 | 4 | 7 | 7 | 3 | -1 | -1 | 0 | 4 | 8 | 8 | 4 | 0 | -1 | 0 | 4 | 7 | 7 | 4 | 0 | 0 | 0 | 2 | 3 | 3 | 3 |
| 68 | 0 | 0 | 1 | 4 | 7 | 7 | 3 | 0 | -1 | 1 | 4 | 7 | 7 | 4 | 0 | -1 | 1 | 3 | 5 | 5 | 4 | 0 | 0 | 0 | 1 | 1 | 1 | 2 |
| 72 | 0 | 1 | 1 | 3 | 5 | 6 | 3 | 0 | 0 | 0 | 2 | 3 | 5 | 5 | 0 | 1 | 2 | 3 | 3 | 3 | 3 | 0 | -1 | 0 | 0 | 0 | 0 | 2 |
| 76 | 0 | 1 | 2 | 2 | 4 | 4 | 3 | 0 | 1 | 2 | 2 | 3 | 3 | 3 | 0 | 0 | 2 | 2 | 2 | 2 | 3 | 0 | -1 | 0 | -1 | -1 | -1 | 1 |
| 80 | 0 | 2 | 2 | 2 | 3 | 3 | 3 | 0 | 2 | 2 | 2 | 2 | 2 | 3 | 0 | 1 | 2 | 1 | 0 | 0 | 2 | 0 | -1 | 0 | -1 | -2 | -2 | 1 |

**MARCH**

| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | -1 | -2 | -2 | -3 | -3 | 0 | 0 | -2 | -5 | -8 | -8 | -6 | 0 | 0 | -3 | -8 | -11 | -11 | -7 |
| 20 | 0 | 0 | -1 | 1 | 2 | 2 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | -4 | 1 | 0 | -2 | -6 | -9 | -10 | -7 | 1 | 0 | -3 | -9 | -13 | -13 | -8 |
| 24 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | 1 | -2 | -4 | -5 | -5 | -3 | 1 | 1 | -2 | -7 | -11 | -10 | -6 | 1 | 1 | -2 | -8 | -13 | -12 | -7 |
| 28 | 1 | 0 | -2 | -3 | -2 | -1 | -1 | 1 | 1 | -1 | -4 | -6 | -5 | -2 | 1 | 2 | 0 | -5 | -8 | -7 | -3 | 1 | 2 | 1 | -3 | -6 | -6 | -3 |
| 32 | 0 | 0 | -2 | -5 | -5 | -4 | -1 | 1 | 1 | -1 | -4 | -5 | -4 | -1 | 1 | 2 | 2 | -1 | -3 | -2 | 1 | 1 | 2 | 4 | 3 | 2 | 2 | 2 |
| 36 | 0 | 0 | -2 | -5 | -7 | -5 | -2 | 1 | 1 | 0 | -2 | -3 | -2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | 0 | 2 | 5 | 8 | 9 | 9 | 6 |
| 40 | 1 | 0 | -1 | -4 | -6 | -5 | -2 | 1 | 1 | 1 | -1 | -1 | 0 | 2 | 0 | 2 | 3 | 5 | 5 | 6 | 5 | 0 | 2 | 5 | 10 | 12 | 11 | 7 |
| 44 | 1 | 1 | 0 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 1 | 3 | 5 | 6 | 6 | 4 | 0 | 1 | 4 | 8 | 10 | 10 | 6 |
| 48 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 0 | 1 | 2 | 4 | 6 | 6 | 4 | 0 | 1 | 2 | 6 | 8 | 8 | 5 |
| 52 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 4 | 5 | 5 | 3 | 0 | 1 | 1 | 4 | 6 | 6 | 4 | 0 | 1 | 1 | 4 | 6 | 7 | 4 |
| 56 | 0 | 0 | 1 | 4 | 5 | 4 | 2 | 0 | 0 | 1 | 4 | 7 | 6 | 4 | 0 | 0 | 1 | 4 | 6 | 7 | 5 | 0 | 0 | 1 | 2 | 5 | 6 | 4 |
| 60 | 0 | 0 | 1 | 4 | 6 | 5 | 3 | 0 | -1 | 1 | 4 | 6 | 7 | 4 | 0 | 0 | 1 | 3 | 5 | 7 | 4 | 0 | 0 | 1 | 1 | 4 | 5 | 4 |
| 64 | 0 | 0 | 2 | 4 | 5 | 5 | 3 | -1 | -1 | 1 | 3 | 5 | 6 | 3 | 0 | -1 | 1 | 2 | 4 | 5 | 3 | 0 | -1 | 0 | 0 | 2 | 3 | 2 |
| 68 | 0 | 0 | 1 | 3 | 4 | 4 | 2 | -1 | -1 | 1 | 2 | 3 | 4 | 2 | 0 | -1 | 1 | 1 | 3 | 3 | 2 | 0 | -1 | 0 | 0 | 1 | 1 | 1 |
| 72 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | -1 | 1 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 |
| 76 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 |
| 80 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | -1 |

**APRIL**

| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 0 | 1 | 0 | -2 | -3 | -2 | -1 | 0 | 1 | 0 | -2 | -2 | -2 | -1 |
| 20 | 0 | 0 | 0 | -2 | -1 | -1 | 0 | 0 | 1 | 0 | -2 | -2 | -2 | 0 | 1 | 1 | 1 | -2 | -3 | -2 | -1 | 0 | 1 | 0 | -2 | -3 | -2 | -1 |
| 24 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 0 | 1 | 1 | -1 | -3 | -2 | -1 | 1 | 1 | 1 | -1 | -3 | -3 | -1 | 0 | 1 | 1 | -1 | -3 | -2 | -1 |
| 28 | 0 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -2 | -2 | -1 | 0 | 1 | 2 | 0 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | -1 |
| 32 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 2 | 0 | -1 | -1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 |
| 36 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 |
| 40 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 1 |
| 44 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 1 |
| 48 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 |
| 52 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 0 |
| 56 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 |
| 60 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 |
| 64 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 76 | 0 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 80 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | -1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

78

TEMPERATURE - (ZONAL MEAN TEMPERATURE) (K)

## JANUARY

| KM LAT | 60E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | -2 | -6 | -10 | -10 | -6 | 0 | 0 | 0 | -3 | -6 | -7 | -4 | -1 | 0 | 2 | 4 | 4 | 2 | 1 | -1 | 0 | 5 | 9 | 12 | 12 | 6 |
| 20 | 1 | 1 | -2 | -7 | -12 | -12 | -7 | 0 | 0 | 0 | -3 | -6 | -7 | -4 | -1 | 0 | 3 | 5 | 5 | 4 | 2 | -1 | 0 | 5 | 11 | 15 | 14 | 7 |
| 24 | 1 | 1 | -1 | -6 | -10 | -10 | -6 | 0 | 0 | 1 | -1 | -2 | -3 | -1 | -1 | 0 | 3 | 6 | 9 | 7 | 4 | -1 | 0 | 5 | 12 | 18 | 17 | 9 |
| 28 | 0 | 1 | 1 | -2 | -4 | -3 | -2 | 0 | 0 | 1 | 2 | 3 | 3 | 2 | -1 | 0 | 3 | 7 | 10 | 9 | 6 | -1 | 0 | 4 | 10 | 15 | 14 | 8 |
| 32 | 0 | 1 | 2 | 3 | 3 | 4 | 2 | 0 | 0 | 2 | 5 | 8 | 8 | 5 | 0 | 0 | 2 | 6 | 10 | 10 | 6 | -1 | -1 | 1 | 6 | 9 | 8 | 5 |
| 36 | 0 | 1 | 4 | 7 | 9 | 8 | 4 | 0 | 0 | 2 | 7 | 10 | 11 | 6 | 0 | 0 | 1 | 4 | 8 | 8 | 5 | 0 | -1 | -2 | 0 | 2 | 3 | 3 |
| 40 | 0 | 1 | 4 | 9 | 11 | 10 | 6 | 0 | 1 | 2 | 7 | 11 | 11 | 6 | 0 | 0 | 0 | 2 | 5 | 6 | 4 | 0 | -1 | -4 | -5 | -4 | -2 | 1 |
| 44 | 0 | 0 | 3 | 7 | 10 | 10 | 6 | 0 | 1 | 2 | 5 | 8 | 8 | 4 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | -1 | -4 | -6 | -7 | -5 | -2 |
| 48 | 0 | 0 | 2 | 4 | 7 | 7 | 5 | 0 | 1 | 2 | 3 | 5 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | 0 | -1 | -3 | -5 | -7 | -8 | -4 |
| 52 | 0 | 0 | 1 | 2 | 3 | 4 | 3 | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -4 | -3 | 0 | -1 | -2 | -4 | -6 | -8 | -5 |
| 56 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | -1 | -1 | -2 | -6 | -4 | 0 | 0 | -1 | -3 | -6 | -8 | -5 |
| 60 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -4 | -2 | 0 | 0 | -1 | -3 | -4 | -6 | -3 | 0 | 0 | -1 | -4 | -7 | -8 | -4 |
| 64 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | -1 | -2 | -4 | -5 | -2 | 0 | -1 | -1 | -3 | -5 | -6 | -3 | 0 | -1 | -1 | -3 | -6 | -6 | -3 |
| 68 | 0 | 0 | -1 | -2 | -4 | -4 | -2 | 0 | -1 | -1 | -2 | -4 | -5 | -2 | 0 | -1 | -1 | -3 | -4 | -5 | -2 | 0 | -1 | -1 | -2 | -4 | -4 | -2 |
| 72 | 0 | 0 | -1 | -2 | -4 | -4 | -2 | 0 | -1 | -1 | -2 | -4 | -4 | -2 | 0 | -1 | -1 | -2 | -3 | -3 | -1 | 0 | -1 | -1 | -1 | -2 | -2 | -1 |
| 76 | 0 | 0 | 0 | -2 | -4 | -4 | -2 | 0 | -1 | -1 | -2 | -4 | -3 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 80 | 0 | 0 | 0 | -2 | -4 | -4 | -2 | 0 | -1 | -1 | -2 | -3 | -2 | -1 | -1 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 |

## FEBRUARY

| KM LAT | 60E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | -2 | -4 | -8 | -10 | -4 | 1 | 0 | 0 | -2 | -9 | -8 | -3 | 0 | -1 | 2 | 1 | -4 | -2 | -2 | -1 | 0 | 3 | 4 | 5 | 5 | 1 |
| 20 | 0 | 1 | 0 | -5 | -10 | -11 | -4 | 2 | 1 | 2 | -1 | -10 | -9 | -3 | 1 | 0 | 2 | 3 | -3 | -2 | -2 | -1 | -1 | 2 | 5 | 7 | 6 | 0 |
| 24 | 2 | -1 | -1 | -4 | -9 | -9 | -6 | 0 | -1 | -1 | -1 | -5 | -5 | -3 | -1 | 0 | 1 | 3 | 3 | 1 | 2 | -2 | 1 | 4 | 7 | 9 | 7 | 5 |
| 28 | 0 | 1 | 2 | -1 | -3 | -3 | -4 | -1 | 0 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 2 | 5 | 7 | 5 | 4 | 0 | 0 | 2 | 7 | 10 | 7 | 6 |
| 32 | -1 | 2 | 4 | 4 | 4 | 2 | -2 | -1 | 2 | 5 | 8 | 7 | 7 | 3 | 0 | 0 | 3 | 8 | 9 | 9 | 6 | 0 | -2 | 0 | 4 | 7 | 6 | 6 |
| 36 | -1 | 2 | 4 | 8 | 9 | 7 | 3 | 0 | 2 | 4 | 9 | 13 | 11 | 6 | 0 | 0 | 2 | 6 | 10 | 10 | 6 | 1 | -1 | -1 | 1 | 3 | 4 | 3 |
| 40 | -1 | 0 | 5 | 9 | 12 | 9 | 5 | -1 | -1 | 4 | 7 | 14 | 12 | 6 | 0 | -1 | 1 | 3 | 8 | 9 | 4 | 1 | 0 | -3 | -3 | -2 | 1 | 0 |
| 44 | 0 | 1 | 3 | 7 | 8 | 9 | 3 | 0 | 0 | 2 | 5 | 8 | 9 | 3 | 0 | 0 | 0 | 1 | 5 | 5 | 2 | -1 | -1 | -1 | -2 | 0 | -1 | 0 |
| 48 | 1 | 1 | 2 | 4 | 7 | 8 | 3 | 0 | 1 | 1 | 4 | 6 | 6 | 2 | -1 | 0 | 0 | 1 | 2 | 2 | 1 | -1 | -1 | -1 | -1 | -4 | -3 | -1 |
| 52 | 1 | 2 | 2 | 3 | 4 | 5 | 3 | 0 | 1 | 2 | 2 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | -2 | -2 | -1 | -1 | -1 | -1 | -2 | -4 | -5 | -3 |
| 56 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | -2 | -1 | 0 | 0 | 0 | -2 | -5 | -4 | -2 | -1 | 0 | -1 | -3 | -6 | -6 | -3 |
| 60 | 0 | 1 | 1 | 0 | -1 | 0 | 1 | 0 | 1 | 0 | -3 | -5 | -4 | -2 | 0 | 0 | -1 | -5 | -8 | -7 | -3 | 0 | 0 | -1 | -5 | -8 | -7 | -4 |
| 64 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 0 | 0 | -2 | -5 | -7 | -6 | -2 | 0 | -1 | -2 | -6 | -8 | -8 | -4 | 0 | 0 | -2 | -5 | -7 | -7 | -4 |
| 68 | 0 | -1 | -1 | -2 | -4 | -3 | 0 | 0 | -1 | -2 | -5 | -7 | -6 | -2 | 0 | -1 | -2 | -6 | -8 | -7 | -4 | 0 | 0 | -1 | -4 | -6 | -6 | -4 |
| 72 | 0 | -1 | -2 | -3 | -4 | -3 | 0 | -1 | -1 | -3 | -5 | -6 | -5 | -2 | 0 | -1 | -2 | -5 | -6 | -6 | -4 | 0 | 0 | -1 | -3 | -4 | -5 | -4 |
| 76 | -1 | -1 | -2 | -3 | -4 | -3 | -1 | -1 | -2 | -3 | -4 | -6 | -5 | -2 | -1 | -1 | -2 | -4 | -5 | -5 | -3 | 0 | -1 | -1 | -2 | -3 | -3 | -3 |
| 80 | -1 | -2 | -2 | -3 | -4 | -3 | -1 | -1 | -2 | -3 | -4 | -5 | -4 | -2 | -1 | -1 | -2 | -3 | -4 | -4 | -3 | 0 | -1 | -1 | -1 | -2 | -2 | -3 |

## MARCH

| KM LAT | 60E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | -3 | -8 | -11 | -11 | -6 | 0 | -1 | -1 | -4 | -6 | -6 | -3 | -1 | -1 | 1 | 2 | 1 | 1 | 1 | -1 | 0 | 3 | 5 | 6 | 6 | 4 |
| 20 | 0 | 0 | -3 | -8 | -12 | -12 | -7 | -1 | -1 | -1 | -4 | -6 | -6 | -3 | -1 | -1 | 2 | 2 | 2 | 1 | 1 | -1 | 0 | 3 | 7 | 7 | 7 | 4 |
| 24 | 0 | 1 | -1 | -6 | -10 | -9 | -5 | 0 | 0 | 1 | -1 | -3 | -3 | -2 | -1 | -1 | 2 | 4 | 4 | 3 | 1 | -1 | -1 | 3 | 7 | 8 | 7 | 4 |
| 28 | 0 | 1 | 2 | 0 | -2 | -2 | -1 | 0 | 0 | 2 | 3 | 3 | 2 | 0 | -1 | 0 | 2 | 5 | 6 | 4 | 1 | -1 | -1 | 2 | 6 | 7 | 5 | 2 |
| 32 | 0 | 2 | 5 | 7 | 7 | 6 | 3 | 0 | 1 | 4 | 8 | 9 | 7 | 2 | 0 | 0 | 2 | 5 | 7 | 5 | 1 | -1 | -1 | -1 | 2 | 4 | 2 | 0 |
| 36 | 0 | 2 | 6 | 11 | 13 | 12 | 6 | 0 | 1 | 4 | 9 | 12 | 10 | 4 | 0 | 0 | 1 | 4 | 7 | 5 | 1 | 0 | -1 | -2 | -2 | 0 | -1 | -2 |
| 40 | 0 | 2 | 6 | 12 | 15 | 14 | 7 | 0 | 1 | 4 | 9 | 12 | 11 | 5 | 0 | 0 | 0 | 3 | 5 | 4 | 1 | 0 | -1 | -3 | -4 | -3 | -3 | -3 |
| 44 | 0 | 1 | 4 | 9 | 11 | 11 | 6 | 0 | 0 | 2 | 6 | 9 | 8 | 4 | 0 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | -1 | -2 | -3 | -3 | -3 | -2 |
| 48 | 0 | 0 | 2 | 6 | 8 | 8 | 4 | 0 | 0 | 1 | 4 | 6 | 6 | 3 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | -2 | -3 | -3 | -3 | -2 |
| 52 | 0 | 0 | 1 | 3 | 5 | 6 | 3 | 0 | 0 | 1 | 2 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | 0 | 0 | -1 | -3 | -4 | -5 | -3 |
| 56 | 0 | 0 | 1 | 1 | 3 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | -3 | 0 | 0 | -2 | -4 | -6 | -7 | -5 |
| 60 | 0 | 0 | 0 | -1 | 1 | 2 | 2 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -3 | -5 | -5 | -4 | 0 | 0 | -2 | -4 | -7 | -7 | -5 |
| 64 | 0 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 | -2 | -4 | -5 | -6 | -3 | 0 | 0 | -2 | -4 | -6 | -6 | -4 |
| 68 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -2 | -3 | -4 | -4 | -1 | 0 | 0 | -2 | -3 | -5 | -5 | -2 | 0 | 0 | -2 | -3 | -4 | -4 | -3 |
| 72 | 0 | -1 | -1 | -2 | -2 | -2 | 0 | 0 | -1 | -2 | -3 | -3 | -3 | -1 | -1 | 0 | -2 | -3 | -4 | -3 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 |
| 76 | 0 | -1 | -1 | -1 | -2 | -2 | 0 | -1 | -1 | -1 | -2 | -3 | -2 | -1 | -1 | -1 | -2 | -2 | -3 | -2 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 |
| 80 | 0 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -3 | -2 | 0 | -1 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |

## APRIL

| KM LAT | 60E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 3 | 3 | 1 | 0 |
| 20 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 2 | 3 | 2 | . | -1 | -1 | 0 | 3 | 3 | 2 | 0 |
| 24 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | 1 | 2 | 1 | 0 | -1 | -2 | 0 | 2 | 3 | 2 | 0 | 0 | -1 | 0 | 3 | 3 | 2 | 1 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 2 | 2 | 0 | -1 | -1 | -1 | 1 | 3 | 2 | 1 | 0 | -1 | -1 | 1 | 2 | 2 | 1 |
| 32 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | -1 | 1 | 1 | 1 |
| 36 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | -2 | -1 | 0 | 1 |
| 40 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 |
| 44 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -1 | 0 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 |
| 52 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 |
| 56 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 60 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 64 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 68 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 72 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 |
| 76 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | -1 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 0 |
| 80 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | -1 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 |

## APRIL

| KM LAT= | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 |
| 20 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 24 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 2 | 1 | 1 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 28 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 0 |
| 32 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 |
| 36 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 0 | 0 |
| 40 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | 0 | 0 | 0 |
| 44 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | 0 | 0 | 0 |
| 48 | 0 | -1 | -1 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -2 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 0 | 0 |
| 52 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -2 | -3 | -2 | -1 | 0 | 1 | 0 | -2 | -3 | -2 | -1 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 0 | 0 |
| 56 | -1 | -2 | -3 | -2 | -1 | 0 | 1 | -1 | -2 | -3 | -3 | -1 | 0 | 1 | -1 | -2 | -3 | -2 | -1 | 0 | 1 | -1 | -2 | -2 | -1 | 0 | 0 | 1 |
| 60 | -1 | -2 | -3 | -3 | -1 | 0 | 1 | -1 | -3 | -3 | -3 | -1 | 0 | 1 | -1 | -3 | -3 | -2 | 0 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 1 | 1 |
| 64 | -2 | -2 | -4 | -3 | -1 | 0 | 1 | -1 | -3 | -3 | -3 | -1 | 0 | 1 | -1 | -2 | -3 | -2 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 |
| 68 | -2 | -3 | -4 | -3 | -1 | 0 | 1 | -2 | -3 | -3 | -2 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 |
| 72 | -2 | -3 | -4 | -3 | -1 | 0 | 1 | -2 | -2 | -3 | -2 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 1 | 1 | 1 |
| 76 | -2 | -3 | -3 | -3 | -1 | 1 | 1 | -1 | -2 | -3 | -1 | 0 | 1 | 1 | 0 | -1 | -2 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 80 | -2 | -2 | -3 | -3 | -1 | 1 | 2 | -1 | -2 | -3 | -1 | 1 | 1 | 1 | 0 | -1 | -2 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 1 | 1 |

## MAY

| KM LAT= | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 20 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 24 | 2 | 3 | 3 | 1 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 |
| 28 | 2 | 4 | 4 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 |
| 32 | 2 | 4 | 4 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -2 | -3 | -3 | -1 | 0 | 0 |
| 36 | 2 | 3 | 3 | 2 | 0 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | -3 | -4 | -3 | -1 | 0 | 0 |
| 40 | 1 | 2 | 2 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | -1 | -3 | -4 | -3 | -1 | 0 | 1 |
| 44 | 1 | 2 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 1 |
| 48 | 1 | 1 | 1 | 0 | -1 | -2 | -1 | 0 | -1 | -1 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | -2 | -3 | -3 | -2 | 0 | 0 | 1 |
| 52 | 1 | 1 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -1 | -1 | -3 | -3 | -3 | -2 | -1 | 0 | -2 | -3 | -3 | -2 | 0 | 1 | 1 |
| 56 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -2 | -2 | -3 | -2 | -2 | -1 | -2 | -3 | -4 | -3 | -1 | -1 | 0 | -2 | -3 | -3 | -1 | 0 | 1 | 1 |
| 60 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -2 | -2 | -1 | -2 | -3 | -4 | -3 | -1 | -1 | 0 | -2 | -3 | -3 | -1 | 0 | 1 | 1 |
| 64 | 0 | -1 | -1 | -2 | -2 | -1 | -1 | -1 | -3 | -3 | -3 | -2 | -1 | -1 | -2 | -4 | -4 | -3 | -1 | 0 | 0 | -2 | -3 | -3 | -1 | 1 | 1 | 1 |
| 68 | 0 | -1 | -1 | -2 | -2 | -1 | -1 | -1 | -3 | -3 | -3 | -2 | -1 | 0 | -2 | -4 | -4 | -2 | 0 | 0 | 0 | -2 | -3 | -3 | -1 | 1 | 1 | 1 |
| 72 | 0 | -1 | -1 | -2 | -2 | -1 | -1 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 1 | 1 | 1 |
| 76 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 1 | 1 | 1 |
| 80 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -2 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | 0 | 2 | 1 | 1 |

## JUNE

| KM LAT= | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 20 | 1 | 2 | 3 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 3 | 3 | 3 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 24 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 3 | 4 | 3 | 2 | 1 | 1 | 0 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 28 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 |
| 32 | 2 | 3 | 3 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 0 |
| 36 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 0 |
| 40 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 |
| 44 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | -1 | 0 |
| 48 | 1 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | 0 | -1 | 0 | 0 |
| 52 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 |
| 56 | 0 | 0 | -1 | -2 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | -1 | -1 | -2 | -2 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 1 | 2 | 2 | 1 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 |
| 64 | -1 | -2 | -2 | -2 | 0 | 2 | 2 | -1 | -1 | -1 | -1 | 2 | 3 | 2 | 1 | -1 | -1 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | -1 | -1 |
| 68 | -1 | -2 | -2 | -2 | 1 | 3 | 3 | -1 | -1 | -1 | 0 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 2 | 0 | 1 | 1 | 1 | -1 | -1 |
| 72 | -1 | -2 | -2 | -2 | 1 | 4 | 3 | 0 | -1 | -1 | 0 | 2 | 4 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 0 | -1 | -1 |
| 76 | -1 | -2 | -2 | -2 | 2 | 4 | 3 | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | -2 | -1 |
| 80 | -1 | -1 | -1 | -1 | 2 | 5 | 3 | 0 | 0 | 0 | 1 | 3 | 4 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 2 | 1 | 1 | 1 | 0 | -2 | -1 |

## JULY

| KM LAT= | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | -1 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 1 | 0 | 0 |
| 20 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | 0 |
| 24 | 1 | 3 | 3 | 3 | 1 | 1 | 0 | 2 | 3 | 3 | 2 | 0 | 1 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 |
| 28 | 1 | 3 | 2 | 2 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 0 |
| 32 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | 0 | -2 | -1 | 0 | 0 |
| 36 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | -1 | -3 | -5 | -4 | -2 | -1 | 0 | -1 | -2 | -4 | -3 | -1 | 0 | -1 | -1 | -1 | -2 | -1 | 0 | 0 |
| 40 | 0 | -1 | -4 | -5 | -5 | -3 | -1 | -1 | -2 | -5 | -6 | -5 | -2 | -1 | -1 | -2 | -3 | -4 | -3 | -1 | 0 | -1 | -2 | -1 | -2 | -1 | 0 | 1 |
| 44 | -1 | -2 | -5 | -6 | -6 | -3 | -1 | -1 | -3 | -6 | -7 | -6 | -3 | -1 | -1 | -3 | -4 | -5 | -3 | -1 | 0 | -1 | -2 | -1 | -2 | 0 | 0 | 1 |
| 48 | -1 | -2 | -6 | -7 | -6 | -4 | -2 | -1 | -3 | -7 | -7 | -6 | -3 | -1 | -1 | -4 | -5 | -5 | -3 | -1 | 0 | -2 | -3 | -1 | -2 | 0 | 1 | 1 |
| 52 | -1 | -3 | -6 | -7 | -7 | -4 | -2 | -1 | -4 | -7 | -8 | -6 | -3 | -1 | -2 | -4 | -5 | -5 | -3 | -1 | 0 | -2 | -3 | -2 | -2 | 0 | 1 | 1 |
| 56 | -1 | -3 | -7 | -8 | -7 | -4 | -2 | -2 | -4 | -8 | -8 | -6 | -2 | -1 | -2 | -4 | -5 | -5 | -3 | 0 | 0 | -2 | -3 | -1 | -1 | 1 | 2 | 1 |
| 60 | -2 | -4 | -7 | -8 | -7 | -3 | -1 | -2 | -5 | -8 | -9 | -6 | -2 | -1 | -3 | -4 | -5 | -5 | -2 | 0 | 1 | -2 | -3 | -1 | 0 | 2 | 2 | 1 |
| 64 | -2 | -4 | -8 | -9 | -7 | -3 | -1 | -3 | -5 | -9 | -9 | -6 | -2 | 0 | -3 | -4 | -5 | -5 | -2 | 0 | 1 | -2 | -3 | 0 | 0 | 2 | 2 | 1 |
| 68 | -2 | -5 | -8 | -9 | -6 | -2 | -1 | -3 | -5 | -9 | -9 | -5 | -1 | 0 | -3 | -4 | -5 | -5 | -1 | 1 | 1 | -2 | -2 | 0 | 1 | 3 | 2 | 1 |
| 72 | -3 | -5 | -8 | -9 | -6 | -2 | -1 | -4 | -6 | -9 | -9 | -5 | -1 | 0 | -3 | -4 | -5 | -4 | -1 | 1 | 1 | -2 | -1 | 1 | 2 | 3 | 2 | 2 |
| 76 | -3 | -5 | -8 | -9 | -6 | -2 | -1 | -4 | -5 | -8 | -9 | -5 | -1 | 0 | -3 | -4 | -4 | -4 | -1 | 1 | 1 | -2 | -1 | 1 | 2 | 3 | 2 | 2 |
| 80 | -3 | -5 | -8 | -9 | -6 | -2 | -1 | -4 | -5 | -8 | -9 | -6 | -1 | 0 | -3 | -3 | -4 | -4 | -2 | 1 | 1 | -2 | -1 | 1 | 1 | 3 | 2 | 2 |

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### APRIL

| KM LAT= | LONGITUDE 60 W -80 | -70 | -60 | -50 | -40 | -30 | -20 | LONGITUDE 30 W -80 | -70 | -60 | -50 | -40 | -30 | -20 | LONGITUDE 0 DEG -80 | -70 | -60 | -50 | -40 | -30 | -20 | LONGITUDE 30 E -80 | -70 | -60 | -50 | -40 | -30 | -20DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 20 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 24 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 |
| 28 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 |
| 32 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | -1 | 0 | 1 | 0 | 0 | 0 |
| 36 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | 0 |
| 40 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | 1 | 2 | 2 | 1 | 0 | -1 |
| 44 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 |
| 48 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | 0 | 2 | 3 | 3 | 1 | 0 | -1 |
| 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | 0 | -1 | 0 | 2 | 3 | 3 | 1 | 0 | -1 |
| 56 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 3 | 4 | 3 | 2 | 0 | -1 | 1 | 3 | 4 | 3 | 2 | 0 | -1 |
| 60 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 1 | 3 | 4 | 4 | 2 | 0 | -1 | 1 | 3 | 4 | 3 | 2 | 0 | -1 |
| 64 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 4 | 3 | 2 | 0 | 0 | 1 | 4 | 5 | 4 | 2 | 0 | -1 | 1 | 3 | 4 | 4 | 2 | 0 | -1 |
| 68 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 4 | 4 | 2 | 0 | 0 | 1 | 4 | 5 | 5 | 2 | 0 | -1 | 1 | 4 | 5 | 4 | 1 | 0 | -1 |
| 72 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 4 | 5 | 4 | 2 | 0 | 0 | 1 | 5 | 6 | 5 | 2 | 0 | -1 | 1 | 4 | 5 | 4 | 1 | 0 | -1 |
| 76 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 4 | 5 | 4 | 2 | 0 | 0 | 1 | 5 | 6 | 5 | 2 | 0 | -1 | 1 | 4 | 4 | 3 | 1 | 0 | -1 |
| 80 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 4 | 5 | 4 | 2 | 0 | 0 | 1 | 5 | 6 | 5 | 2 | 0 | -1 | 1 | 3 | 4 | 3 | 1 | 0 | -1 |

### MAY

| KM LAT= | 60W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 30W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 0DEG -80 | -70 | -60 | -50 | -40 | -30 | -20 | 30E -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -2 | -2 | -1 | 0 | -1 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 20 | -1 | -1 | -1 | -1 | 0 | -1 | 0 | -2 | -2 | -2 | -1 | 0 | -1 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 |
| 24 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -4 | -3 | -2 | -1 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 |
| 28 | -1 | -3 | -4 | -2 | -1 | 0 | 0 | -3 | -4 | -4 | -2 | -1 | 0 | 0 | -3 | -4 | -4 | -1 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 0 | 0 | 0 |
| 32 | -2 | -4 | -5 | -3 | -1 | 0 | 0 | -3 | -4 | -5 | -2 | 0 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 1 | 0 | 0 |
| 36 | -2 | -3 | -4 | -3 | 0 | 1 | 1 | -2 | -3 | -4 | -2 | 0 | 1 | 1 | -2 | -3 | -3 | -1 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 |
| 40 | -2 | -3 | -4 | -2 | 0 | 1 | 1 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | -2 | -2 | -1 | 0 | 1 | 1 | 1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 44 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | -2 | -2 | -2 | 0 | 1 | 1 | 1 | -2 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 48 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | -2 | -2 | -1 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 52 | -2 | -3 | -2 | -1 | 1 | 2 | 1 | -2 | -1 | -1 | 1 | 2 | 2 | 1 | -1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 0 |
| 56 | -2 | -3 | -2 | 0 | 1 | 2 | 1 | -2 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 0 |
| 60 | -2 | -2 | -1 | 1 | 2 | 2 | 1 | -2 | -1 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 |
| 64 | -2 | -2 | -1 | 1 | 2 | 1 | 1 | -2 | 0 | 1 | 3 | 2 | 1 | 1 | -1 | 1 | 3 | 3 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | 0 | 0 |
| 68 | -2 | -2 | 0 | 1 | 2 | 1 | 1 | -2 | 0 | 2 | 3 | 2 | 1 | 0 | -1 | 1 | 3 | 3 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | -1 | 0 |
| 72 | -2 | -2 | 0 | 2 | 2 | 1 | 1 | -2 | 0 | 2 | 3 | 2 | 0 | 0 | -1 | 1 | 3 | 3 | 1 | -1 | -1 | 1 | 2 | 2 | 1 | 0 | -1 | 0 |
| 76 | -2 | -1 | 0 | 2 | 2 | 1 | 1 | -1 | 0 | 2 | 3 | 1 | 0 | 0 | -1 | 1 | 3 | 2 | 0 | -1 | -1 | 1 | 2 | 2 | 1 | -1 | -1 | -1 |
| 80 | -2 | -1 | 0 | 2 | 2 | 1 | 0 | -1 | 0 | 2 | 3 | 1 | 0 | 0 | -1 | 1 | 2 | 2 | 0 | -1 | -1 | 0 | 1 | 2 | 0 | -1 | -1 | -1 |

### JUNE

| KM LAT= | 60W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 30W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 0DEG -80 | -70 | -60 | -50 | -40 | -30 | -20 | 30E -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -1 | -1 | -1 | 0 | -2 | -3 | -3 | -1 | 0 | 0 | 0 |
| 20 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -2 | -1 | -1 | -1 | -1 | -1 | -2 | -3 | -2 | -1 | -1 | -1 | 0 | -3 | -3 | -3 | -1 | 0 | 0 | 0 |
| 24 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 | -3 | -3 | -3 | -2 | -1 | 0 | 0 | -3 | -3 | -3 | -1 | 0 | 0 | 0 |
| 28 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -3 | -3 | -3 | -1 | 0 | 0 | 0 |
| 32 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| 36 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | -2 | -2 | -1 | 1 | 1 | 1 | 0 |
| 40 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -1 | 0 | 1 | 2 | 1 | 0 | -2 | -1 | 0 | 1 | 2 | 1 | 0 |
| 44 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 |
| 48 | 0 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 2 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 |
| 52 | 0 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 2 | 2 | 2 | 1 | 0 | -1 | 1 | 2 | 2 | 2 | 1 | 0 |
| 56 | 1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | -1 | 1 | 3 | 3 | 2 | 1 | 0 | -1 | 1 | 2 | 3 | 2 | 1 | 0 |
| 60 | 1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 2 | 0 | -1 | -1 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | -1 | 2 | 3 | 3 | 2 | 1 | 0 |
| 64 | 1 | 1 | 1 | 1 | 0 | -2 | -2 | 1 | 1 | 3 | 3 | 0 | -2 | -2 | 0 | 2 | 4 | 3 | 1 | -1 | -1 | -1 | 2 | 3 | 3 | 1 | 0 | 0 |
| 68 | 2 | 1 | 2 | 2 | 0 | -2 | -2 | 1 | 2 | 3 | 3 | 0 | -2 | -2 | 0 | 2 | 4 | 3 | 1 | -1 | -1 | -1 | 2 | 3 | 3 | 1 | 0 | -1 |
| 72 | 2 | 1 | 2 | 2 | 0 | -3 | -3 | 1 | 2 | 3 | 3 | 0 | -3 | -3 | 0 | 2 | 4 | 4 | 1 | -1 | -2 | -1 | 2 | 2 | 3 | 1 | -1 | -1 |
| 76 | 2 | 1 | 2 | 2 | 0 | -3 | -3 | 1 | 2 | 3 | 3 | 0 | -3 | -2 | 0 | 2 | 4 | 4 | 1 | -1 | -2 | -1 | 2 | 2 | 3 | 1 | -1 | -1 |
| 80 | 2 | 1 | 2 | 2 | -1 | -3 | -2 | 1 | 2 | 3 | 3 | 0 | -2 | -2 | 0 | 2 | 4 | 4 | 2 | -1 | -2 | -1 | 1 | 2 | 3 | 1 | -1 | -1 |

### JULY

| KM LAT= | 60W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 30W -80 | -70 | -60 | -50 | -40 | -30 | -20 | 0DEG -80 | -70 | -60 | -50 | -40 | -30 | -20 | 30E -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 2 | 2 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -2 | -3 | -2 | -1 | 0 | -1 | -1 | -3 | -4 | -2 | -1 | 0 | 0 |
| 20 | 1 | 1 | 2 | -1 | 0 | -1 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | -1 | -1 | -3 | -4 | -3 | -1 | 0 | -1 | -1 | -4 | -5 | -3 | -1 | 0 | 0 |
| 24 | 0 | 0 | 1 | -2 | -1 | -1 | 0 | -1 | -2 | -2 | -3 | -1 | -1 | 0 | -2 | -4 | -5 | -4 | -2 | 0 | 0 | -2 | -4 | -6 | -3 | -1 | 0 | 0 |
| 28 | 0 | -1 | 0 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -4 | -2 | 0 | 0 | -1 | -3 | -5 | -4 | -2 | 0 | 0 | -1 | -3 | -5 | -3 | -1 | 0 | 0 |
| 32 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -4 | -3 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 |
| 36 | -1 | -2 | -1 | -2 | 0 | 0 | 1 | -1 | -2 | -2 | -2 | 0 | 1 | 0 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 40 | -1 | -2 | 0 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 3 | 3 | 2 | 0 |
| 44 | -1 | -2 | 0 | 0 | 2 | 1 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 4 | 3 | 2 | 1 |
| 48 | -1 | -2 | 0 | 0 | 2 | 2 | 1 | -1 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 1 | 2 | 3 | 3 | 5 | 4 | 2 | 1 |
| 52 | -1 | -1 | 1 | 1 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 3 | 4 | 5 | 4 | 2 | 1 |
| 56 | -2 | -1 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 4 | 2 | 1 | 1 | 2 | 3 | 4 | 4 | 2 | 0 | 2 | 4 | 4 | 5 | 4 | 2 | 1 |
| 60 | -1 | -1 | 2 | 3 | 4 | 3 | 1 | 0 | 1 | 3 | 4 | 4 | 2 | 1 | 2 | 3 | 3 | 4 | 3 | 2 | 0 | 3 | 4 | 4 | 5 | 3 | 1 | 0 |
| 64 | -1 | -1 | 3 | 4 | 5 | 3 | 1 | 0 | 1 | 3 | 4 | 4 | 2 | 0 | 2 | 3 | 3 | 3 | 3 | 1 | 0 | 3 | 4 | 4 | 4 | 2 | 1 | 0 |
| 68 | -1 | 0 | 3 | 4 | 5 | 3 | 1 | 1 | 1 | 3 | 4 | 4 | 2 | 0 | 2 | 3 | 3 | 3 | 2 | 1 | -1 | 3 | 4 | 4 | 3 | 1 | 0 | -1 |
| 72 | -1 | 0 | 4 | 5 | 5 | 3 | 1 | 1 | 1 | 3 | 4 | 4 | 1 | 0 | 2 | 3 | 2 | 2 | 1 | 0 | -1 | 3 | 4 | 3 | 2 | 0 | -1 | -1 |
| 76 | 0 | 0 | 3 | 4 | 5 | 3 | 1 | 1 | 1 | 3 | 3 | 3 | 1 | 0 | 3 | 2 | 1 | 1 | 1 | 0 | -1 | 3 | 4 | 2 | 2 | 0 | -1 | -1 |
| 80 | 0 | 1 | 4 | 4 | 5 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 1 | 0 | 3 | 2 | 0 | 1 | 1 | 0 | -1 | 3 | 3 | 2 | 2 | 0 | -1 | -1 |

S HEMISPHERE                          (PRESSURE)/(ZONAL MEAN PRESSURE) - 1  (%)

|  | LONGITUDE 60 E | | | | | | | LONGITUDE 90 E | | | | | | | LONGITUDE 120 E | | | | | | | LONGITUDE 150 E | | | | | | |
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20DEG |

**APRIL**

| KM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 20 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 24 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 28 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 32 | -2 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 36 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 |
| 40 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 44 | 0 | 1 | 2 | 1 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 |
| 48 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 |
| 52 | 1 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 56 | 1 | 2 | 3 | 2 | 1 | 0 | -1 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -3 | -2 | -2 | 0 | 0 |
| 60 | 1 | 2 | 3 | 2 | 1 | 0 | -1 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 |
| 64 | 1 | 2 | 2 | 2 | 0 | -1 | -1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -3 | -2 | -2 | -1 | 0 | -1 | -3 | -4 | -3 | -2 | 0 | 0 |
| 68 | 1 | 2 | 2 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | -2 | -2 | -1 | 0 | -1 | -3 | -3 | -4 | -3 | -1 | 0 | -2 | -3 | -4 | -4 | -2 | 0 | 1 |
| 72 | 1 | 1 | 2 | 1 | 0 | -1 | -2 | 0 | -2 | -2 | -2 | -2 | -2 | -1 | -1 | -3 | -4 | -4 | -3 | -1 | 0 | -2 | -3 | -4 | -4 | -2 | 0 | 1 |
| 76 | 1 | 1 | 1 | 1 | 0 | -1 | -2 | 0 | -2 | -2 | -3 | -2 | -2 | -1 | -2 | -4 | -4 | -4 | -3 | -1 | 0 | -2 | -3 | -4 | -4 | -2 | 0 | 1 |
| 80 | 0 | 1 | 1 | 0 | -1 | -1 | -2 | | | | | | | | | | | | | | | | | | | | | |

**MAY**

| KM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 20 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 24 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 2 | 4 | 4 | 2 | 1 | 0 | 0 |
| 28 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | -1 |
| 32 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | -1 | 2 | 4 | 5 | 3 | 1 | 0 | -1 |
| 36 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | -1 | 2 | 3 | 4 | 2 | 0 | -1 | -1 |
| 40 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | -1 | 2 | 3 | 3 | 2 | 0 | -1 | -1 |
| 44 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | -1 | 2 | 2 | 2 | 1 | 0 | -1 | -1 |
| 48 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 2 | 0 | 0 | -1 | 2 | 2 | 2 | 1 | 0 | -1 | -1 |
| 52 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 3 | 1 | 1 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | -1 |
| 56 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | -1 | -1 | -1 |
| 60 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | -1 | -1 | -1 |
| 64 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | -1 | -1 | 0 |
| 68 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | -1 | 0 | 0 | 0 | 3 | 2 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 |
| 72 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | -1 | 0 | 0 | 0 | 2 | 2 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 |
| 76 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 2 | 2 | 0 | -1 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 0 |
| 80 | 1 | 2 | 0 | -1 | -1 | -1 | 0 | | | | | | | | | | | | | | | | | | | | | |

**JUNE**

| KM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -2 | -2 | -3 | -1 | 0 | 0 | 0 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 20 | -2 | -2 | -3 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 |
| 24 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 28 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 32 | -2 | -1 | -1 | 0 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | -1 |
| 36 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | | 1 | 0 | -1 | -1 | -1 | -1 | |
| 40 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -1 | | | 0 | -1 | -2 | -2 | -1 | 0 | |
| 44 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | | 0 | 0 | -1 | -2 | -2 | -1 | 0 |
| 48 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 |
| 52 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | -1 | -1 | -2 | -3 | -3 | -2 | 0 |
| 56 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 1 |
| 60 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -3 | -4 | -3 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | 1 | 2 |
| 64 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -2 | -4 | -4 | -3 | 0 | 1 | -1 | -2 | -3 | -4 | -1 | 2 | 3 |
| 68 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -2 | -3 | -3 | -1 | 0 | -1 | -2 | -4 | -4 | -3 | 0 | 1 | -1 | -3 | -3 | -4 | -1 | 2 | 3 |
| 72 | -1 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -3 | -3 | -3 | -1 | | -1 | -3 | -4 | -4 | -3 | 0 | 1 | -1 | -2 | -3 | -4 | -1 | 3 | 3 |
| 76 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -3 | -3 | -3 | -1 | | -1 | -3 | -4 | -5 | -3 | 0 | 1 | | | | | | | |
| 80 | -1 | 0 | -1 | 0 | -1 | -1 | -1 | -1 | -2 | -3 | -3 | -3 | 0 | | | | | | | | | | | | | | | |

**JULY**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -3 | -4 | -2 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 2 | 0 | 0 | 0 |
| 20 | -1 | -3 | -4 | -2 | 0 | 0 | 0 | -1 | -1 | -2 | -1 | 1 | 0 | 0 | -1 | 1 | 3 | 3 | 2 | 0 | 0 | 0 | 2 | 4 | 4 | 2 | 1 | 0 |
| 24 | -2 | -3 | -4 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 5 | 5 | 3 | 1 | 0 | 0 | 2 | 4 | 4 | 2 | 1 | 0 |
| 28 | -1 | -2 | -2 | 0 | 0 | 0 | 0 | -1 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 2 | 5 | 5 | 3 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | 0 | 0 |
| 32 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 1 | 2 | 4 | 5 | 3 | 1 | 0 | 0 | 2 | 5 | 5 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -2 | -1 |
| 36 | 1 | 2 | 3 | 4 | 3 | 1 | 0 | 1 | 3 | 6 | 6 | 4 | 1 | 0 | 0 | 2 | 2 | 3 | 2 | -1 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 |
| 40 | 2 | 3 | 4 | 6 | 4 | 2 | 1 | 1 | 3 | 6 | 7 | 4 | 1 | 0 | 1 | 2 | 3 | 3 | 2 | 0 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | |
| 44 | 2 | 4 | 5 | 6 | 4 | 2 | 1 | 2 | 4 | 6 | 6 | 4 | 1 | 0 | 1 | 2 | 2 | 2 | 0 | -1 | -1 | 0 | -1 | -2 | -4 | -4 | -3 | -2 |
| 48 | 2 | 4 | 6 | 7 | 4 | 2 | 1 | 2 | 4 | 6 | 6 | 3 | 1 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | -1 | 0 | -1 | -3 | -4 | -5 | -3 | -2 |
| 52 | 2 | 4 | 6 | 7 | 4 | 2 | 1 | 2 | 4 | 6 | 6 | 3 | 0 | 0 | 1 | 2 | 3 | 2 | -1 | -2 | -1 | -1 | -2 | -3 | -4 | -4 | -3 | -2 |
| 56 | 3 | 5 | 6 | 6 | 3 | 1 | 0 | 2 | 4 | 6 | 6 | 2 | 0 | 0 | 1 | 2 | 2 | 2 | -1 | -2 | -1 | -1 | -2 | -3 | -4 | -4 | -3 | -1 |
| 60 | 3 | 5 | 6 | 6 | 3 | 1 | 0 | 3 | 4 | 6 | 6 | 2 | 0 | 0 | 1 | 2 | 2 | 2 | 0 | -1 | 0 | -1 | -2 | -3 | -4 | -4 | -2 | -1 |
| 64 | 3 | 5 | 6 | 6 | 2 | 0 | 0 | 3 | 4 | 6 | 6 | 2 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | -1 | -2 | -3 | -4 | -3 | -2 | -1 |
| 68 | 4 | 5 | 6 | 5 | 2 | 0 | 0 | 3 | 4 | 6 | 6 | 2 | 0 | 0 | 1 | 2 | 3 | 3 | 0 | -1 | 0 | -1 | -2 | -3 | -3 | -3 | -2 | -1 |
| 72 | 4 | 5 | 5 | 5 | 1 | 0 | 0 | 3 | 4 | 6 | 6 | 2 | 0 | 0 | 1 | 2 | 3 | 3 | 1 | -1 | 0 | -1 | -2 | -3 | -3 | -3 | -2 | 0 |
| 76 | 4 | 5 | 5 | 5 | 1 | 0 | 0 | 3 | 4 | 6 | 6 | 2 | 0 | 0 | 1 | 2 | 4 | 4 | 1 | -1 | 0 | | | | | | | |
| 80 | 3 | 5 | 5 | 5 | 2 | 0 | 0 | 2 | 4 | 7 | 7 | 3 | 0 | 0 | | | | | | | | | | | | | | |

82

S HEMISPHERE                                          (PRESSURE)/(ZONAL MEAN PRESSURE) - 1   (%)

| | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 . | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | 40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | 20DEG |

AUGUST

| KM | -80 | -70 | -60 | -50 | 40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | 20 |
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| 18 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 1 | 0 | 3 | 5 | 6 | 4 | 2 | 1 | 0 | 3 | 5 | 5 | 3 | 1 | 1 | 0 |
| 20 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 2 | 1 | 1 | 0 | 3 | 5 | 5 | 3 | 2 | 1 | 0 | 3 | 4 | 4 | 2 | 1 | 0 | 0 |
| 24 | 4 | 5 | 3 | 2 | 1 | 0 | 0 | 4 | 5 | 4 | 2 | 1 | 0 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 28 | 4 | 5 | 4 | 3 | 1 | 1 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 |
| 32 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 2 | 2 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | -2 | -4 | -3 | -1 | 0 | -1 | -2 | -3 | -4 | -2 | -1 | 0 |
| 36 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -3 | -5 | -3 | -1 | 0 | -1 | -3 | -3 | -3 | -2 | 0 | 0 |
| 40 | 3 | 2 | -1 | -2 | -1 | -1 | -1 | 1 | 0 | -3 | -4 | -3 | -2 | 0 | 0 | -2 | -4 | -5 | -3 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 1 |
| 44 | 2 | 1 | -2 | -3 | -2 | -2 | -1 | 1 | -1 | -4 | -5 | -4 | -2 | 0 | -1 | -3 | -4 | -4 | -3 | -1 | 0 | -2 | -3 | -2 | -1 | 0 | 1 | 1 |
| 48 | 2 | 0 | -3 | -4 | -3 | -2 | -1 | 0 | -2 | -5 | -5 | -4 | -2 | 0 | -1 | -3 | -4 | -4 | -2 | -1 | 0 | -2 | -3 | -2 | -1 | 0 | 1 | 1 |
| 52 | 1 | 0 | -4 | -4 | -3 | -2 | -1 | 0 | -2 | -5 | -5 | -4 | -2 | 0 | -1 | -3 | -3 | -3 | -2 | 0 | 1 | -2 | -2 | -1 | -1 | 1 | 2 | 1 |
| 56 | 1 | -1 | -5 | -5 | -3 | -2 | -1 | 0 | -2 | -5 | -5 | -3 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 1 | -1 | -1 | 1 | 2 | 2 | 2 | 1 |
| 60 | 1 | -1 | -5 | -5 | -3 | -1 | 0 | 0 | -2 | -5 | -4 | -3 | -1 | 0 | 0 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | 0 | 2 | 4 | 3 | 2 | 1 |
| 64 | 1 | -1 | -5 | -5 | -2 | -1 | 0 | 1 | -2 | -4 | -4 | -2 | -1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 4 | 5 | 4 | 3 | 1 |
| 68 | 2 | -1 | -5 | -5 | -2 | -1 | 0 | 2 | -1 | -3 | -3 | -2 | -1 | 0 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 3 | 6 | 7 | 5 | 3 | 1 |
| 72 | 2 | -1 | -5 | -5 | -3 | -1 | 1 | 3 | 0 | -2 | -3 | -2 | 0 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 3 | 5 | 7 | 8 | 6 | 3 | 1 |
| 76 | 3 | 0 | -4 | -5 | -3 | -1 | 1 | 4 | 2 | -1 | -2 | -1 | 0 | 1 | 4 | 4 | 4 | 4 | 3 | 2 | 1 | 3. | 6 | 8 | 9 | 6 | 3 | 1 |
| 80 | 4 | 0 | -4 | -5 | -3 | -1 | 1 | 5 | 3 | -1 | -2 | -1 | 0 | 1 | 5 | 6 | 5 | 4 | 4 | 3 | 1 | 4 | 7 | 8 | 9 | 7 | 4 | 1 |

SEPTEMBER

| KM | -80 | -70 | -60 | -50 | 40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | 20 |
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| 18 | 0 | 5 | 7 | 5 | 3 | 1 | 1 | 1 | 5 | 7 | 5 | 3 | 1 | 1 | 2 | 4 | 5 | 3 | 2 | 1 | 0 | 3 | 3 | 3 | 2 | 1 | 0 | 0 |
| 20 | 1 | 5 | 7 | 5 | 3 | 1 | 1 | 2 | 5 | 6 | 4 | 2 | 1 | 1 | 2 | 4 | 3 | 2 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 |
| 24 | 2 | 5 | 7 | 4 | 2 | 1 | 1 | 1 | 4 | 4 | 3 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -1 | -1 | 0 |
| 28 | 1 | 4 | 5 | 3 | 2 | 1 | 1 | -1 | 1 | 1 | 1 | 0 | 0 | 1 | -3 | -2 | -3 | -2 | -1 | 0 | 0 | -3 | -5 | -5 | -4 | -2 | -1 | 0 |
| 32 | 0 | 2 | 3 | 2 | 1 | 0 | 1 | -2 | -1 | -1 | -1 | -1 | 0 | 1 | -4 | -4 | -5 | -4 | -2 | 0 | 1 | -4 | -6 | -6 | -5 | -2 | 0 | 0 |
| 36 | -1 | 1 | 2 | 1 | 0 | 0 | 1 | -3 | -3 | -2 | -2 | -1 | 0 | 1 | -5 | -6 | -5 | -4 | -2 | 0 | 1 | -5 | -7 | -6 | -5 | -2 | 0 | 0 |
| 40 | -2 | 0 | 1 | 0 | -1 | 0 | 1 | -4 | -4 | -3 | -3 | -1 | 0 | 1 | -6 | -7 | -6 | -4 | -2 | 1 | 1 | -6 | -7 | -6 | -4 | -1 | 1 | 1 |
| 44 | -2 | -1 | 0 | -1 | -1 | 0 | 1 | -5 | -5 | -3 | -3 | -1 | 0 | 1 | -6 | -7 | -5 | -4 | -1 | 1 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 |
| 48 | -2 | -2 | -1 | -1 | -1 | 0 | 1 | -5 | -5 | -4 | -2 | -1 | 1 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 | -6 | -6 | -4 | -2 | 0 | 1 | 1 |
| 52 | -3 | -3 | -2 | -1 | -1 | 0 | 1 | -5 | -5 | -4 | -3 | -1 | 1 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 | -5 | -6 | -3 | -2 | 0 | 1 | 1 |
| 56 | -4 | -4 | -3 | -2 | -2 | 0 | 1 | -6 | -6 | -4 | -3 | -1 | 1 | 1 | -6 | -7 | -4 | -2 | 0 | 1 | 1 | -5 | -5 | -2 | -1 | 1 | 2 | 1 |
| 60 | -4 | -5 | -4 | -3 | -2 | 0 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 | -6 | -6 | -4 | -2 | 0 | 2 | 2 | -4 | -4 | -1 | 0 | 1 | 2 | 1 |
| 64 | -5 | -6 | -4 | -3 | -2 | 0 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 | -5 | -6 | -3 | -1 | 0 | 2 | 2 | -3 | -2 | 0 | 1 | 2 | 2 | 1 |
| 68 | -5 | -6 | -5 | -4 | -2 | 0 | 1 | -5 | -7 | -5 | -3 | -1 | 1 | 2 | -4 | -5 | -3 | -1 | 1 | 2 | 2 | -2 | -1 | 1 | 2 | 2 | 2 | 1 |
| 72 | -5 | -6 | -5 | -4 | -2 | 0 | 1 | -5 | -6 | -4 | -3 | -1 | 2 | 2 | -3 | -4 | -2 | -1 | 1 | 2 | 2 | -1 | 0 | 2 | 3 | 2 | 2 | 1 |
| 76 | -5 | -6 | -4 | -3 | -2 | 0 | 1 | -4 | -6 | -4 | -3 | -1 | 2 | 2 | -2 | -3 | -2 | 0 | 1 | 2 | 2 | 0 | 1 | 3 | 3 | 3 | 2 | 1 |
| 80 | -5 | -6 | -4 | -3 | -2 | 1 | 1 | -4 | -5 | -4 | -2 | -1 | 2 | 2 | -2 | -3 | -1 | 0 | 1 | 3 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 |

OCTOBER

| KM | -80 | -70 | -60 | -50 | 40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 3 | 5 | 6 | 3 | 2 | 1 | 0 | 4 | 7 | 7 | 4 | 2 | 1 | 0 | 4 | 6 | 6 | 4 | 2 | 1 | 0 | 3 | 3 | 2 | 1 | 1 | 0 | 0 |
| 20 | 4 | 6 | 6 | 4 | 2 | 1 | 0 | 4 | 7 | 7 | 4 | 2 | 1 | 0 | 4 | 6 | 5 | 3 | 2 | 0 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 0 |
| 24 | 5 | 7 | 7 | 4 | 2 | 1 | 0 | 4 | 7 | 7 | 4 | 2 | 1 | 0 | 3 | 5 | 4 | 2 | 1 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 |
| 28 | 5 | 8 | 9 | 5 | 2 | 1 | 0 | 4 | 7 | 7 | 4 | 1 | 0 | 0 | 2 | 3 | 3 | 1 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 32 | 4 | 7 | 8 | 4 | 2 | 1 | 0 | 3 | 6 | 6 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | 0 |
| 36 | 4 | 7 | 7 | 4 | 1 | 0 | 0 | 3 | 5 | 5 | 2 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 |
| 40 | 3 | 6 | 6 | 3 | 1 | 0 | 0 | 2 | 5 | 5 | 2 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | -1 | 0 | 1 | -1 | -2 | -3 | -3 | -2 | 0 | 0 |
| 44 | 3 | 5 | 4 | 2 | 0 | 0 | 0 | 2 | 4 | 4 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | -1 | 0 | 1 | -1 | -2 | -3 | -2 | -1 | 0 | 1 |
| 48 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 2 | 4 | 4 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | -1 | 0 | 1 | -1 | -2 | -2 | -2 | -1 | 0 | 1 |
| 52 | 2 | 3 | 2 | 0 | -1 | 0 | 0 | 1 | 4 | 3 | 0 | -1 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | -1 | -1 | -2 | -2 | -1 | 0 | 1 |
| 56 | 2 | 2 | 1 | -1 | -1 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | -1 | -1 | -1 | -1 | 0 | 0 | 1 |
| 60 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 0 | 1 |
| 64 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | -1 | 0 | 1 | . | 1 | 3 | 3 | 1 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 76 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 3 | 4 | 2 | 1 | 2 | 1 | 1 | 3 | 4 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 80 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 4 | 4 | 2 | 1 | 2 | 1 | 1 | 3 | 4 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 |

NOVEMBER

| KM | -80 | -70 | -60 | -50 | 40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 20 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 24 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 |
| 28 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 |
| 32 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 |
| 40 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 48 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 52 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 |
| 56 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 |
| 60 | -2 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 |
| 64 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 0 | 0 |
| 68 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 2 | 1 | 0 | 0 |
| 72 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 2 | 1 | 0 | 0 |
| 76 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 2 | 2 | 0 | 0 | 0 |
| 80 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 0 | 2 | 3 | 3 | 2 | 0 | 0 | 0 |

83

|  | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20DEG |

### AUGUST

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | -1 | -2 | -3 | -3 | -1 | -1 | -1 | -1 | -2 | -3 | -2 | 0 | 0 | 0 | 0 |
| 20 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | -1 | -3 | -4 | -3 | -1 | -1 | -1 | 0 | -3 | -4 | -2 | 0 | 0 | 0 | 0 |
| 24 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -4 | -5 | -3 | -1 | 0 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 |
| 28 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -3 | -4 | -3 | 0 | 1 | 0 | 0 | -3 | -4 | -2 | 0 | 0 | 0 | 0 |
| 32 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -3 | -3 | -2 | 0 | 1 | 1 | 0 | -3 | -3 | -2 | 1 | 1 | 1 | 0 | -2 | -3 | -1 | 0 | 0 | 0 | 0 |
| 36 | -2 | -3 | -2 | -1 | 1 | 1 | 1 | -3 | -3 | -1 | 1 | 2 | 1 | 1 | -3 | -2 | -1 | 2 | 2 | 1 | 0 | -2 | -2 | 0 | 1 | 0 | 0 | 0 |
| 40 | -2 | -3 | -1 | 0 | 1 | 1 | 1 | -3 | -2 | 0 | 2 | 3 | 2 | 1 | -2 | -2 | 0 | 2 | 2 | 1 | 0 | -2 | -1 | 1 | 1 | 0 | 0 | 0 |
| 44 | -2 | -3 | -1 | 1 | 2 | 2 | 1 | -2 | -2 | 0 | 3 | 3 | 1 | 0 | -2 | -1 | 1 | 2 | 1 | 0 | 0 | -1 | 0 | 2 | 1 | 0 | 0 | 0 |
| 48 | -2 | -2 | 0 | 2 | 3 | 2 | 1 | -2 | -1 | 1 | 3 | 3 | 1 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | 1 | 2 | 2 | 0 | 0 | 0 |
| 52 | -2 | -1 | 1 | 3 | 3 | 2 | 1 | -1 | 0 | 2 | 3 | 3 | 1 | 0 | -1 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | -1 | -1 | 0 |
| 56 | -1 | 0 | 3 | 4 | 4 | 2 | 1 | -1 | 1 | 3 | 3 | 2 | 1 | 0 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | -1 |
| 60 | 0 | 1 | 4 | 5 | 4 | 2 | 1 | -1 | 1 | 3 | 3 | 2 | 0 | 0 | -1 | 0 | 1 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | -2 | -3 | -2 | -1 |
| 64 | 1 | 2 | 6 | 7 | 5 | 2 | 1 | 0 | 2 | 4 | 3 | 2 | 0 | -1 | -1 | 0 | 0 | -1 | -3 | -3 | -2 | -2 | -1 | -1 | -3 | -4 | -3 | -2 |
| 68 | 1 | 3 | 7 | 8 | 5 | 2 | 0 | 0 | 2 | 4 | 3 | 1 | -1 | -1 | -2 | -1 | 0 | -2 | -4 | -3 | -2 | -3 | -3 | -2 | -4 | -5 | -3 | -2 |
| 72 | 2 | 4 | 7 | 8 | 5 | 2 | 0 | 0 | 1 | 3 | 3 | 1 | -1 | -2 | -3 | -2 | -1 | -3 | -4 | -4 | -2 | -4 | -4 | -3 | -5 | -6 | -3 | -2 |
| 76 | 2 | 5 | 7 | 8 | 5 | 2 | 0 | -1 | 1 | 3 | 3 | 0 | -2 | -2 | -3 | -3 | -2 | -3 | -5 | -4 | -3 | -5 | -5 | -4 | -5 | -6 | -4 | -2 |
| 80 | 2 | 5 | 7 | 8 | 5 | 2 | 0 | -1 | 0 | 2 | 2 | -1 | -2 | -2 | -4 | -5 | -3 | -4 | 5 | -4 | -3 | -6 | -6 | -4 | -5 | -6 | -4 | -2 |

### SEPTEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 0 | -1 | -2 | -1 | -1 | -1 | -1 | -3 | -4 | -4 | -2 | -1 | 0 | -2 | -6 | -7 | -5 | -2 | -1 | 0 |
| 20 | 1 | 0 | -1 | -1 | -1 | 1 | 0 | 0 | -2 | -2 | -2 | -1 | -1 | 0 | -2 | -4 | -4 | -3 | -2 | -1 | 0 | -2 | -5 | -6 | -4 | -2 | -1 | 0 |
| 24 | -2 | -4 | -4 | -3 | -2 | -1 | 0 | -2 | -4 | -4 | -3 | -2 | -1 | 0 | -2 | -4 | -4 | -3 | -2 | -1 | 0 | -1 | -3 | -4 | -3 | -1 | 0 | 0 |
| 28 | -3 | -5 | -6 | -4 | -2 | -1 | 0 | -2 | -4 | -5 | -3 | -2 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 |
| 32 | -4 | -6 | -6 | -4 | -2 | -1 | 0 | -2 | -4 | -4 | -3 | -1 | -1 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 |
| 36 | -4 | -6 | -5 | -4 | -1 | 0 | 0 | -1 | -3 | -3 | -2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 2 | 1 | 0 | 0 |
| 40 | -4 | -5 | -4 | -2 | -1 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 4 | 5 | 3 | 2 | 1 | 0 | -1 |
| 44 | -4 | -4 | -3 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 3 | 3 | 2 | 2 | 1 | 0 | 0 | 5 | 5 | 3 | 2 | 1 | 0 | -1 |
| 48 | -3 | -3 | -2 | -1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 3 | 4 | 3 | 2 | 2 | 0 | -1 | 5 | 5 | 3 | 2 | 1 | 0 | -1 |
| 52 | -3 | -2 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 0 | 4 | 4 | 3 | 3 | 2 | 0 | -1 | 6 | 6 | 3 | 2 | 1 | 0 | -1 |
| 56 | -2 | -1 | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 4 | 3 | 2 | 1 | 0 | 4 | 6 | 4 | 3 | 2 | 1 | -1 | 6 | 6 | 3 | 2 | 1 | 0 | -1 |
| 60 | -1 | 1 | 3 | 3 | 2 | 2 | 1 | 2 | 5 | 5 | 4 | 3 | 1 | 0 | 5 | 7 | 5 | 4 | 2 | 1 | -1 | 6 | 6 | 3 | 2 | 1 | 0 | -1 |
| 64 | 0 | 2 | 4 | 4 | 3 | 1 | 1 | 3 | 6 | 7 | 5 | 3 | 1 | 0 | 5 | 7 | 6 | 4 | 2 | 0 | -1 | 6 | 6 | 3 | 2 | 1 | 0 | -1 |
| 68 | 1 | 3 | 5 | 5 | 3 | 1 | 0 | 4 | 7 | 7 | 6 | 3 | 1 | 0 | 5 | 8 | 6 | 4 | 2 | 0 | -1 | 5 | 6 | 3 | 1 | 1 | -1 | -1 |
| 72 | 2 | 4 | 6 | 5 | 3 | 1 | 0 | 4 | 7 | 8 | 6 | 3 | 1 | -1 | 5 | 8 | 6 | 4 | 2 | 0 | -1 | 5 | 6 | 2 | 1 | 0 | -1 | -1 |
| 76 | 2 | 5 | 6 | 6 | 4 | 2 | 0 | 4 | 7 | 8 | 6 | 3 | 1 | -1 | 5 | 7 | 6 | 4 | 2 | 0 | -1 | 4 | 5 | 2 | 1 | 0 | -1 | -1 |
| 80 | 3 | 5 | 7 | 6 | 4 | 2 | 0 | 4 | 7 | 8 | 6 | 4 | 1 | 0 | 4 | 7 | 5 | 4 | 2 | 0 | -1 | 4 | 4 | 1 | 0 | 0 | -1 | -1 |

### OCTOBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -4 | -4 | -3 | -2 | -1 | 0 | -3 | -5 | -5 | -3 | -2 | -1 | 0 | -4 | -5 | -5 | -3 | -1 | 0 | 0 |
| 20 | 0 | -2 | -2 | -2 | -1 | -1 | 0 | -3 | -5 | -5 | -3 | -2 | -1 | 0 | -4 | -6 | -5 | -3 | -2 | -1 | 0 | -4 | -6 | -5 | -3 | -1 | 0 | 0 |
| 24 | -2 | -4 | -5 | -3 | -2 | -1 | 0 | -4 | -7 | -7 | -4 | -2 | -1 | 0 | -4 | -7 | -6 | -4 | -2 | -1 | 0 | -4 | -6 | -5 | -3 | -1 | -1 | 0 |
| 28 | -3 | -5 | -6 | -4 | -2 | -1 | 0 | -4 | -7 | -8 | -5 | -2 | -1 | 0 | -4 | -7 | -7 | -4 | -2 | -1 | 0 | -4 | -5 | -4 | -2 | -1 | -1 | 0 |
| 32 | -3 | -6 | -7 | -5 | -2 | -1 | 0 | -4 | -7 | -8 | -5 | -2 | -1 | 0 | -4 | -6 | -6 | -4 | -2 | -1 | 0 | -3 | -4 | -3 | -2 | -1 | 0 | 0 |
| 36 | -3 | -6 | -7 | -5 | -2 | 0 | 0 | -4 | -7 | -7 | -5 | -2 | 0 | 0 | -3 | -6 | -5 | -3 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 |
| 40 | -3 | -5 | -6 | -4 | -2 | 0 | 0 | -3 | -6 | -7 | -4 | -1 | 0 | 0 | -3 | -5 | -4 | -2 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 |
| 44 | -3 | -5 | -6 | -4 | -1 | 0 | 0 | -3 | -6 | -6 | -3 | -1 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -1 | 0 | 1 | 1 | 0 | -1 |
| 48 | -2 | -4 | -5 | -3 | -1 | 0 | 0 | -3 | -5 | -5 | -2 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 1 | 0 | 0 | -1 | -1 | 1 | 2 | 1 | 0 | -1 |
| 52 | -2 | -4 | -4 | -2 | -1 | 0 | 0 | -2 | -4 | -4 | -2 | 0 | 0 | 0 | -2 | -2 | -1 | 1 | 1 | 0 | 0 | -1 | 0 | 2 | 2 | 1 | 0 | -1 |
| 56 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -2 | -3 | -3 | -1 | 0 | 0 | 0 | -1 | -2 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 2 | 3 | 1 | 0 | -1 |
| 60 | -1 | -3 | -2 | -1 | 0 | 0 | 0 | -1 | -3 | -2 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 |
| 64 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | -1 |
| 68 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 2 | 0 | -1 | -1 |
| 72 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -1 |
| 76 | -1 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 2 | 1 | 0 | -1 | -1 |
| 80 | -1 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | -2 | -3 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 |

### NOVEMBER

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -2 | -2 | -2 | -1 | 0 | 0 |
| 24 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | -1 | 0 | 0 |
| 28 | -1 | -2 | -2 | -2 | 0 | 0 | 0 | -2 | -2 | -3 | -2 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |
| 32 | -1 | -2 | -2 | -2 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 44 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 48 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 52 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 56 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 |
| 60 | 2 | 3 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 0 | -1 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 |
| 64 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 |
| 68 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 72 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 76 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 80 | 3 | 3 | 1 | 1 | -1 | 0 | 0 | 2 | 2 | 0 | -1 | -1 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |

**AUGUST**

| KM LAT | 60 E | | | | | | | 90 E | | | | | | | 120 E | | | | | | | 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 |
| 20 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 |
| 24 | -3 | -3 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | 0 | 0 |
| 28 | -2 | -2 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 3 | 4 | 4 | 3 | 2 | 1 | 0 |
| 32 | -1 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | 0 | 3 | 5 | 5 | 4 | 2 | 1 | 0 |
| 36 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 3 | 1 | 0 | 0 | 0 | 3 | 4 | 4 | 3 | 2 | 0 | 0 | 3 | 4 | 4 | 3 | 2 | 0 | 0 |
| 40 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 4 | 4 | 3 | 2 | 0 | 0 | 3 | 4 | 2 | 1 | 1 | 0 | 0 |
| 44 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | 0 | 3 | 4 | 3 | 2 | 2 | 1 | 0 | 3 | 3 | 1 | 0 | 0 | 0 | -1 |
| 48 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 1 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 3 | 2 | 0 | -1 | 0 | -1 | -1 |
| 52 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 2 | 3 | 4 | 2 | 1 | 1 | 0 | 2 | 3 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | -1 | -2 | -1 | -1 | -1 |
| 56 | 0 | 1 | 2 | 1 | -1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 1 | -2 | -2 | -1 | -1 | 0 |
| 60 | -1 | 0 | 1 | -1 | -2 | -1 | -1 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | -3 | -2 | 0 | 0 | 0 |
| 64 | -2 | -1 | 0 | -2 | -2 | -1 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | -3 | -2 | 0 | 0 | 1 |
| 68 | -3 | -2 | -1 | -2 | -3 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 2 | 2 | 1 | 1 | -1 | -4 | -3 | 0 | 1 | 1 |
| 72 | -4 | -3 | -2 | -3 | -3 | -1 | -1 | -2 | -2 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -2 | 0 | 2 | 2 | 2 | 1 | -1 | -4 | -3 | 0 | 1 | 1 |
| 76 | -5 | -4 | -3 | -3 | -2 | -1 | -1 | -3 | -2 | -1 | 0 | 2 | 2 | 1 | -1 | -1 | -2 | 0 | 2 | 2 | 2 | 1 | -1 | -4 | -3 | 0 | 0 | 1 |
| 80 | -6 | -5 | -3 | -3 | -2 | -1 | -1 | -4 | -2 | -1 | 0 | 2 | 2 | 1 | -1 | -1 | -2 | -1 | 2 | 2 | 2 | 2 | -1 | -4 | -4 | -1 | 0 | 1 |

**SEPTEMBER**

| KM LAT | 60 E | | | | | | | 90 E | | | | | | | 120 E | | | | | | | 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | -2 | -6 | -7 | -5 | -2 | -1 | 0 | -2 | -4 | -5 | -3 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 3 | 5 | 4 | 2 | 1 | 1 |
| 20 | -2 | -5 | -6 | -4 | -2 | -1 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 4 | 6 | 4 | 2 | 1 | 0 |
| 24 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 1 | 0 | 2 | 5 | 6 | 5 | 2 | 1 | 0 |
| 28 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 1 | 0 | 0 | 3 | 5 | 6 | 4 | 2 | 1 | 0 | 2 | 5 | 7 | 5 | 2 | 1 | 0 |
| 32 | 4 | 4 | 3 | 2 | 1 | 0 | 0 | 4 | 5 | 5 | 4 | 2 | 0 | 0 | 4 | 5 | 6 | 5 | 2 | 0 | 0 | 2 | 5 | 6 | 4 | 2 | 1 | 0 |
| 36 | 5 | 5 | 4 | 3 | 1 | 0 | -1 | 5 | 6 | 5 | 4 | 2 | 0 | -1 | 4 | 5 | 6 | 4 | 2 | 0 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | 0 |
| 40 | 5 | 6 | 4 | 3 | 1 | 0 | -1 | 5 | 6 | 5 | 3 | 1 | -1 | -1 | 4 | 5 | 5 | 3 | 1 | -1 | -1 | 1 | 3 | 4 | 2 | 0 | 0 | 0 |
| 44 | 6 | 6 | 3 | 2 | 1 | -1 | -1 | 6 | 6 | 4 | 2 | 0 | -1 | -1 | 4 | 4 | 4 | 2 | 0 | -1 | -1 | 1 | 2 | 3 | 1 | 0 | -1 | 0 |
| 48 | 6 | 6 | 3 | 2 | 0 | -1 | -1 | 5 | 5 | 3 | 1 | 0 | -1 | -1 | 4 | 4 | 3 | 1 | -1 | -1 | -1 | 1 | 1 | 2 | 0 | -1 | -1 | 0 |
| 52 | 6 | 5 | 2 | 1 | 0 | -1 | -1 | 5 | 4 | 2 | 1 | -1 | -2 | -1 | 3 | 3 | 2 | 0 | -1 | -2 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | 0 |
| 56 | 6 | 5 | 1 | 1 | 0 | -1 | -1 | 4 | 3 | 1 | 0 | -1 | -2 | -1 | 2 | 1 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | -1 | -1 | -2 | -1 | 0 |
| 60 | 6 | 4 | 1 | 0 | 0 | -1 | -1 | 4 | 2 | 0 | -1 | -1 | -2 | -1 | 1 | 0 | -1 | -2 | -2 | -2 | -1 | -2 | -2 | -2 | -2 | -3 | -1 | 0 |
| 64 | 5 | 4 | 0 | 0 | 0 | -1 | -1 | 3 | 1 | -2 | -2 | -2 | -2 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | -1 | -3 | -4 | -3 | -3 | -3 | -1 | 0 |
| 68 | 4 | 3 | -1 | -1 | -1 | -2 | -1 | 2 | 0 | -2 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -3 | -2 | -1 | -3 | -5 | -4 | -3 | -3 | -1 | 0 |
| 72 | 3 | 2 | -1 | -2 | -1 | -2 | -1 | 1 | -1 | -3 | -3 | -2 | -2 | -1 | -2 | -3 | -4 | -3 | -3 | -2 | -1 | -4 | -5 | -4 | -4 | -3 | -1 | 0 |
| 76 | 3 | 2 | -2 | -2 | -1 | -2 | -1 | 0 | -1 | -3 | -3 | -2 | -2 | -1 | -2 | -3 | -4 | -3 | -3 | -2 | -1 | -4 | -5 | -4 | -3 | -3 | -1 | 0 |
| 80 | 2 | 1 | -2 | -2 | -2 | -2 | -1 | 0 | -1 | -4 | -3 | -3 | -2 | -1 | -2 | -3 | -4 | -3 | -3 | -2 | -1 | -4 | -5 | -4 | -3 | -3 | -1 | 0 |

**OCTOBER**

| KM LAT | 60 E | | | | | | | 90 E | | | | | | | 120 E | | | | | | | 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | -3 | -4 | -4 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 0 |
| 20 | -3 | -4 | -4 | -2 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 1 | 0 |
| 24 | -3 | -3 | -3 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 4 | 6 | 6 | 3 | 2 | 1 | 0 |
| 28 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 3 | 4 | 4 | 3 | 2 | 1 | 0 | 4 | 7 | 7 | 4 | 2 | 1 | 0 |
| 32 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 3 | 4 | 5 | 4 | 2 | 1 | 0 | 4 | 7 | 7 | 4 | 2 | 1 | 0 |
| 34 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 3 | 1 | 0 | 0 | 3 | 4 | 4 | 3 | 2 | 1 | 0 | 4 | 6 | 6 | 4 | 2 | 1 | 0 |
| 40 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 5 | 4 | 3 | 1 | 0 | 0 |
| 44 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 0 |
| 48 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 1 | 1 | 2 | 1 | 0 | -1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 |
| 52 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -1 | 0 | 0 | 0 |
| 56 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 1 | 0 | 1 | 0 | 0 | -1 | 2 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 |
| 60 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | -2 | -1 | -1 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 64 | 0 | 1 | 2 | 2 | 0 | -1 | -1 | 1 | 0 | -1 | 0 | 0 | -1 | 0 | 1 | -1 | -3 | -2 | -1 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 68 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 72 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | 1 | 1 |
| 76 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | 1 | 1 |
| 80 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | -2 | -2 | -1 | -1 | -1 | -1 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 1 |

**NOVEMBER**

| KM LAT | 60 E | | | | | | | 90 E | | | | | | | 120 E | | | | | | | 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | -1 | -2 | -2 | -2 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 20 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 0 |
| 24 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 0 | 0 |
| 28 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 |
| 32 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 |
| 36 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 40 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 48 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 52 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | -1 | 0 | 0 |
| 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 |
| 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 |
| 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -3 | -3 | -2 | 0 | 0 | 0 |
| 68 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -3 | -3 | -2 | 0 | 0 | 0 |
| 72 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -4 | -3 | -1 | 0 | 0 | 0 |
| 76 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -4 | -3 | -1 | 0 | 0 | 0 |
| 80 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -4 | -3 | -1 | 0 | 0 | 0 |

(PRESSURE)/(ZONAL MEAN PRESSURE) - 1   (%)

LONGITUDE 180 DEG    LONGITUDE 150 W    LONGITUDE 120 W    LONGITUDE 90 W

### SEPTEMBER

| KM LAT | 180:20 | 30 | 40 | 50 | 60 | 70 | 80 | 150W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 120W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 90W:20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 76 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | -1 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 80 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 |

### OCTOBER

| KM LAT | 180:20 | 30 | 40 | 50 | 60 | 70 | 80 | 150W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 120W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 90W:20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 1 | 1 | 2 |  | 2 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 1 | 3 | 4 | 4 | 2 | 0 | 0 | 1 | 2 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 32 | 0 | 0 | 1 | 3 | 6 | 6 | 3 | 0 | 0 | 0 | 1 | 3 | 4 | 2 | 0 | 0 | -1 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -4 | -5 | -4 | -2 |
| 36 | 0 | 0 | 1 | 4 | 7 | 8 | 5 | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 0 | 0 | -1 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -5 | -7 | -6 | -3 |
| 40 | 0 | 0 | 0 | 3 | 7 | 9 | 5 | 0 | 0 | -1 | 0 | 2 | 3 | 2 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -6 | -8 | -8 | -5 |
| 44 | 0 | -1 | 0 | 3 | 7 | 8 | 5 | 0 | -1 | -2 | -1 | 1 | 2 | 2 | 0 | -1 | -2 | -4 | -5 | -3 | -2 | 1 | 0 | -2 | -6 | -8 | -8 | -5 |
| 48 | 0 | -1 | 0 | 2 | 6 | 8 | 5 | 0 | -1 | -2 | -2 | 0 | 1 | 1 | 0 | -1 | -3 | -5 | -5 | -4 | -2 | 1 | 0 | -3 | -7 | -9 | -8 | -5 |
| 52 | 0 | -1 | -1 | 2 | 6 | 7 | 4 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -3 | -5 | -6 | -5 | -3 | 1 | 0 | -3 | -7 | -9 | -8 | -5 |
| 56 | 0 | -1 | -1 | 1 | 5 | 6 | 4 | 0 | -1 | -2 | -3 | -1 | 0 | 0 | 0 | -1 | -3 | -6 | -6 | -5 | -3 | 1 | 0 | -3 | -7 | -9 | -7 | -5 |
| 60 | 0 | -1 | -1 | 1 | 4 | 5 | 4 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | -4 | -6 | -6 | -5 | -3 | 1 | 0 | -3 | -7 | -8 | -7 | -5 |
| 64 | 0 | -1 | -1 | 0 | 3 | 5 | 4 | 0 | -1 | -3 | -3 | -2 | 0 | 0 | 0 | -1 | -4 | -6 | -6 | -4 | -3 | 1 | 0 | -3 | -6 | -7 | -5 | -4 |
| 68 | 0 | -1 | -2 | 0 | 3 | 4 | 3 | 0 | -1 | -3 | -3 | -2 | 0 | 0 | 0 | -1 | -4 | -6 | -6 | -4 | -3 | 1 | 0 | -3 | -6 | -8 | -6 | -4 |
| 72 | 0 | -1 | -2 | 0 | 3 | 4 | 3 | 0 | -1 | -3 | -3 | -2 | 0 | 0 | 0 | -1 | -3 | -5 | -6 | -3 | -2 | 1 | 0 | -2 | -6 | -7 | -5 | -4 |
| 76 | 0 | -1 | -2 | 0 | 3 | 5 | 3 | 0 | -1 | -3 | -3 | -2 | 1 | 1 | 0 | 0 | -3 | -5 | -5 | -3 | -1 | 1 | 0 | -2 | -5 | -7 | -4 | -3 |
| 80 | 0 | -1 | -1 | 0 | 3 | 5 | 2 | 0 | 0 | -2 | -3 | -1 | 1 | 1 | 1 | 0 | -3 | -5 | -5 | -2 | -1 | 1 | 1 | -2 | -5 | -7 | -4 | -3 |

### NOVEMBER

| KM LAT | 180:20 | 30 | 40 | 50 | 60 | 70 | 80 | 150W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 120W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 90W:20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | -1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 20 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 1 | 2 | 3 | 4 | 3 | 2 | 0 | 0 | 1 | 2 | 3 | 3 | 2 | -1 | 0 | 0 | 1 | 1 | 2 | 1 |
| 24 | 0 | 1 | 2 | 4 | 5 | 5 | 3 | 0 | 1 | 1 | 4 | 6 | 6 | 4 | 0 | 0 | 0 | 2 | 4 | 5 | 4 | 0 | -1 | -1 | 0 | 2 | 3 | 3 |
| 28 | 0 | 0 | 2 | 6 | 12 | 9 | 5 | 0 | 0 | 1 | 5 | 9 | 10 | 6 | 0 | -1 | -1 | 2 | 5 | 7 | 6 | 0 | -1 | -1 | 0 | 2 | 4 | 4 |
| 32 | 0 | 0 | 2 | 8 | 12 | 12 | 7 | 0 | -1 | 0 | 5 | 11 | 13 | 8 | 0 | -1 | -1 | 1 | 6 | 9 | 6 | 0 | -1 | -2 | -1 | 1 | 3 | 3 |
| 36 | -1 | -1 | 2 | 8 | 14 | 15 | 8 | -1 | -1 | 0 | 5 | 12 | 14 | 9 | 0 | -2 | -2 | 1 | 5 | 8 | 6 | 0 | -1 | -3 | -2 | -1 | 1 | 2 |
| 40 | -1 | -1 | 1 | 8 | 15 | 15 | 9 | -1 | -2 | -1 | 4 | 11 | 13 | 8 | -1 | -2 | -2 | 0 | 5 | 6 | 5 | 0 | -1 | -3 | -3 | -2 | -1 | 0 |
| 44 | -2 | -2 | 0 | 7 | 14 | 15 | 9 | -1 | -2 | -1 | 4 | 10 | 12 | 7 | -1 | -2 | -2 | 0 | 4 | 5 | 4 | 0 | -2 | -3 | -3 | -3 | -2 | -1 |
| 48 | -2 | -2 | 0 | 6 | 14 | 14 | 8 | -1 | -2 | -1 | 3 | 9 | 11 | 7 | -1 | -2 | -2 | 0 | 3 | 4 | 3 | 0 | -1 | -3 | -4 | -5 | -4 | -2 |
| 52 | -2 | -2 | 0 | 6 | 13 | 14 | 8 | -2 | -2 | -1 | 3 | 8 | 10 | 6 | -1 | -2 | -3 | -1 | 0 | 1 | 1 | 0 | -1 | -3 | -5 | -6 | -5 | -2 |
| 56 | -2 | -2 | -1 | 5 | 12 | 13 | 7 | -2 | -2 | -2 | 2 | 7 | 8 | 5 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -1 | -3 | -5 | -7 | -6 | -3 |
| 60 | -2 | -2 | -1 | 5 | 11 | 12 | 6 | -1 | -2 | -2 | 1 | 5 | 7 | 4 | -1 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | -3 | -5 | -7 | -6 | -3 |
| 64 | -1 | -1 | -1 | 4 | 9 | 11 | 5 | -1 | -1 | -2 | 1 | 4 | 5 | 3 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | -1 | -3 | -5 | -7 | -7 | -3 |
| 68 | -1 | -1 | 0 | 3 | 8 | 9 | 5 | -1 | -1 | -1 | 0 | 2 | 4 | 2 | 0 | -1 | -2 | -3 | -3 | -3 | -1 | 0 | -1 | -2 | -5 | -7 | -6 | -3 |
| 72 | -1 | 0 | 0 | 2 | 6 | 8 | 4 | 0 | -1 | -1 | 0 | 1 | 3 | 2 | 0 | -1 | -2 | -3 | -3 | -3 | -1 | 0 | -1 | -2 | -4 | -6 | -6 | -3 |
| 76 | -1 | -1 | 0 | 2 | 5 | 7 | 4 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -2 | -3 | -3 | -3 | -1 | 1 | 0 | -2 | -4 | -5 | -5 | -3 |
| 80 | -1 | -1 | -1 | 2 | 4 | 6 | 3 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 1 | 0 | -1 | -2 | -3 | -3 | -1 | 1 | 0 | -2 | -4 | -5 | -5 | -3 |

### DECEMBER

| KM LAT | 180:20 | 30 | 40 | 50 | 60 | 70 | 80 | 150W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 120W:20 | 30 | 40 | 50 | 60 | 70 | 80 | 90W:20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 20 | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 0 | 1 | 2 | 3 | 4 | 4 | 2 | 0 | 0 | 1 | 4 | 6 | 7 | 4 | -1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 24 | 0 | 1 | 3 | 5 | 7 | 7 | 4 | 0 | 1 | 3 | 6 | 9 | 9 | 5 | 0 | -1 | 0 | 4 | 8 | 9 | 6 | 0 | -1 | -2 | -1 | 1 | 2 | 2 |
| 28 | 0 | 1 | 4 | 9 | 13 | 12 | 6 | 0 | 0 | 3 | 8 | 13 | 13 | 7 | -1 | -1 | -2 | 2 | 8 | 9 | 5 | 0 | -2 | -4 | -4 | -2 | 0 | 1 |
| 32 | 0 | 0 | 4 | 11 | 16 | 15 | 8 | -1 | -1 | 2 | 9 | 16 | 15 | 8 | -1 | -1 | -2 | 2 | 8 | 9 | 5 | 0 | -2 | -5 | -7 | -5 | -3 | 0 |
| 36 | -1 | -1 | 3 | 12 | 18 | 16 | 9 | -1 | -2 | 0 | 7 | 15 | 14 | 8 | -1 | -2 | -4 | -1 | 3 | 3 | 2 | 0 | -2 | -6 | -9 | -7 | -5 | -2 |
| 40 | -1 | -1 | 2 | 11 | 16 | 15 | 9 | -1 | -3 | -2 | 5 | 11 | 11 | 7 | -1 | -3 | -6 | -4 | 1 | 1 | 1 | 0 | -2 | -7 | -10 | -9 | -6 | -2 |
| 44 | -1 | -2 | 1 | 9 | 14 | 13 | 8 | -1 | -3 | -3 | 2 | 8 | 9 | 6 | -1 | -3 | -7 | -6 | -1 | 1 | 1 | 0 | -2 | -7 | -10 | -9 | -7 | -3 |
| 48 | -1 | -2 | 0 | 7 | 12 | 12 | 8 | -1 | -3 | -4 | 0 | 6 | 7 | 5 | -1 | -3 | -7 | -8 | -4 | -2 | 0 | 0 | -1 | -6 | -10 | -10 | -8 | -4 |
| 52 | -1 | -2 | 0 | 5 | 10 | 11 | 8 | -1 | -3 | -5 | -1 | 4 | 5 | 5 | -1 | -3 | -7 | -8 | -5 | -3 | 0 | 0 | -1 | -6 | -10 | -10 | -8 | -4 |
| 56 | -1 | -2 | -1 | 4 | 9 | 10 | 7 | -1 | -3 | -5 | -2 | 2 | 4 | 4 | -1 | -3 | -7 | -8 | -5 | -3 | -1 | 0 | -1 | -5 | -9 | -10 | -8 | -4 |
| 60 | -1 | -2 | -1 | 3 | 7 | 9 | 7 | -1 | -2 | -4 | -2 | 1 | 3 | 4 | 0 | -2 | -6 | -7 | -5 | -3 | -1 | 0 | 0 | -4 | -8 | -9 | -8 | -4 |
| 64 | -1 | -2 | -2 | 2 | 6 | 8 | 7 | -1 | -2 | -4 | -2 | 1 | 3 | 4 | 0 | -2 | -6 | -6 | -5 | -3 | -1 | 0 | 0 | -4 | -7 | -8 | -7 | -4 |
| 68 | 0 | -2 | -2 | 2 | 5 | 8 | 6 | 0 | -2 | -4 | -2 | 1 | 3 | 3 | 0 | -1 | -6 | -5 | -4 | -3 | -1 | 0 | 1 | -4 | -7 | -7 | -7 | -4 |
| 72 | 0 | -1 | -2 | 2 | 5 | 7 | 6 | 0 | -1 | -4 | -1 | 1 | 3 | 3 | 0 | -1 | -5 | -4 | -3 | -2 | -1 | 1 | 1 | -4 | -6 | -6 | -6 | -4 |
| 76 | 0 | -1 | -2 | 2 | 5 | 7 | 5 | 0 | -1 | -4 | -1 | 2 | 3 | 3 | 0 | -1 | -5 | -4 | -3 | -2 | 0 | 1 | 1 | -4 | -5 | -5 | -5 | -3 |
| 80 | 0 | -1 | -1 | 2 | 5 | 6 | 5 | 0 | -1 | -4 | 0 | 3 | 4 | 3 | 0 | -1 | -6 | -4 | -1 | -1 | 0 | 1 | 1 | -4 | -5 | -5 | -5 | -3 |

86

N HEMISPHERE                                   (PRESSURE)/(ZONAL MEAN PRESSURE) - 1  (%)

| KM LAT= | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

SEPTEMBER

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 48 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 52 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 76 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 |
| 80 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 0 | 1 | 0 | 0 | 1 |

OCTOBER

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 2 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 |
| 20 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 2 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 |
| 28 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 |
| 32 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -1 | -3 | -3 | -2 | 0 | 0 | 0 | -1 | -3 | -4 | -2 |
| 36 | 0 | 0 | -1 | -4 | -5 | -5 | -3 | 0 | 1 | 0 | -3 | -5 | -6 | -4 | 0 | 1 | 0 | -2 | -4 | -5 | -3 | 0 | 0 | 0 | -1 | -3 | -4 | -3 |
| 40 | 0 | 0 | -1 | -5 | -7 | -8 | -5 | 1 | 1 | 0 | -3 | -7 | -7 | -5 | 0 | 1 | 0 | -2 | -5 | -6 | -4 | 0 | 1 | 1 | 0 | -3 | -4 | -3 |
| 44 | 1 | 0 | -2 | -5 | -9 | -9 | -5 | 1 | 1 | 0 | -4 | -7 | -8 | -5 | 0 | 1 | 1 | -2 | -5 | -7 | -4 | 0 | 1 | 1 | 0 | -2 | -4 | -2 |
| 48 | 1 | 0 | -2 | -6 | -9 | -9 | -5 | 1 | 1 | 0 | -4 | -8 | -8 | -5 | 1 | 1 | 1 | -1 | -5 | -6 | -4 | 0 | 1 | 2 | 1 | -1 | -3 | -2 |
| 52 | 1 | 1 | -2 | -6 | -9 | -9 | -6 | 1 | 1 | 0 | -4 | -8 | -8 | -5 | 1 | 1 | 1 | -1 | -5 | -6 | -3 | 0 | 1 | 2 | 2 | -1 | -2 | -1 |
| 56 | 1 | 1 | -2 | -6 | -9 | -9 | -6 | 1 | 1 | 0 | -4 | -8 | -8 | -5 | 1 | 2 | 2 | -1 | -4 | -5 | -3 | 0 | 1 | 2 | 2 | 0 | -2 | -1 |
| 60 | 1 | 1 | -2 | -6 | -9 | -8 | -5 | 1 | 2 | 0 | -3 | -7 | -7 | -4 | 1 | 2 | 2 | 0 | -4 | -5 | -3 | 0 | 1 | 3 | 3 | 1 | -1 | -1 |
| 64 | 1 | 1 | -1 | -5 | -8 | -7 | -5 | 1 | 2 | 1 | -3 | -6 | -6 | -4 | 1 | 2 | 2 | 1 | -3 | -4 | -3 | 0 | 1 | 3 | 3 | 1 | -1 | -1 |
| 68 | 1 | 1 | -1 | -5 | -8 | -6 | -5 | 1 | 2 | 1 | -2 | -6 | -5 | -4 | 1 | 2 | 3 | 1 | -2 | -4 | -2 | 0 | 1 | 3 | 4 | 1 | -1 | 0 |
| 72 | 1 | 1 | -1 | -4 | -7 | -5 | -5 | 1 | 2 | 1 | -1 | -5 | -4 | -4 | 1 | 2 | 3 | 1 | -2 | -3 | -3 | 0 | 1 | 3 | 4 | 2 | -1 | -1 |
| 76 | 1 | 1 | 0 | -4 | -7 | -5 | -4 | 1 | 1 | 2 | -1 | -4 | -4 | -4 | 1 | 1 | 3 | 2 | -2 | -3 | -3 | 0 | 1 | 3 | 3 | 1 | -2 | -1 |
| 80 | 1 | 1 | 0 | -3 | -6 | -4 | -4 | 0 | 1 | 2 | -1 | -4 | -4 | -4 | 0 | 1 | 3 | 2 | -1 | -3 | -3 | 0 | 0 | 2 | 3 | 1 | -2 | -1 |

NOVEMBER

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| 20 | -1 | -1 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| 24 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -4 | -4 | -3 |
| 28 | 0 | -1 | -1 | -2 | -1 | 0 | 1 | 0 | 0 | -1 | -2 | -2 | -2 | -2 | 0 | 0 | -1 | -3 | -4 | -5 | -4 | 0 | 0 | -1 | -4 | -7 | -7 | -5 |
| 32 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -2 | -4 | -5 | -5 | -3 | 1 | 1 | -2 | -5 | -8 | -8 | -5 | 1 | 1 | -1 | -6 | -9 | -10 | -6 |
| 36 | 0 | -1 | -3 | -4 | -5 | -4 | -2 | 1 | 0 | -2 | -6 | -8 | -8 | -5 | 1 | 1 | -2 | -7 | -10 | -10 | -6 | 1 | 2 | 0 | -6 | -10 | -11 | -7 |
| 40 | 0 | -1 | -3 | -5 | -7 | -6 | -3 | 1 | 0 | -3 | -7 | -10 | -9 | -6 | 1 | 1 | -1 | -7 | -11 | -11 | -7 | 1 | 2 | 0 | -5 | -10 | -10 | -7 |
| 44 | 0 | -1 | -3 | -6 | -8 | -7 | -4 | 1 | 0 | -3 | -7 | -10 | -10 | -6 | 2 | 2 | -1 | -7 | -11 | -11 | -7 | 2 | 3 | 1 | -5 | -10 | -10 | -6 |
| 48 | 0 | -1 | -3 | -6 | -8 | -8 | -4 | 1 | 1 | -2 | -8 | -11 | -10 | -6 | 2 | 2 | -1 | -7 | -11 | -11 | -6 | 2 | 3 | 2 | -4 | -9 | -9 | -5 |
| 52 | 1 | -1 | -3 | -7 | -9 | -8 | -5 | 1 | 1 | -2 | -8 | -11 | -11 | -6 | 2 | 2 | 0 | -5 | -11 | -11 | -6 | 2 | 3 | 2 | -3 | -8 | -8 | -5 |
| 56 | 1 | 0 | -3 | -7 | -10 | -9 | -5 | 1 | 1 | -2 | -8 | -12 | -10 | -6 | 2 | 3 | 0 | -6 | -10 | -10 | -5 | 2 | 3 | 3 | -2 | -7 | -7 | -4 |
| 60 | 1 | 0 | -3 | -7 | -10 | -9 | -5 | 1 | 1 | -1 | -7 | -11 | -10 | -5 | 2 | 3 | 1 | -5 | -9 | -9 | -5 | 2 | 3 | 3 | -1 | -5 | -6 | -3 |
| 64 | 1 | 0 | -3 | -7 | -10 | -9 | -4 | 1 | 1 | -1 | -6 | -10 | -9 | -5 | 1 | 2 | 1 | -4 | -8 | -7 | -4 | 1 | 2 | 3 | 0 | -4 | -5 | -3 |
| 68 | 1 | 0 | -2 | -6 | -9 | -8 | -4 | 1 | 1 | 0 | -5 | -8 | -8 | -4 | 1 | 2 | 1 | -3 | -6 | -6 | -4 | 1 | 2 | 3 | 0 | -3 | -3 | -2 |
| 72 | 1 | 0 | -2 | -5 | -8 | -7 | -4 | 1 | 1 | 0 | -4 | -7 | -7 | -4 | 1 | 2 | 2 | -2 | -5 | -5 | -3 | 1 | 2 | 2 | 0 | -2 | -2 | -2 |
| 76 | 0 | 0 | -1 | -4 | -7 | -7 | -3 | 1 | 1 | 0 | -3 | -6 | -5 | -3 | 1 | 2 | 2 | -1 | -4 | -3 | -2 | 1 | 2 | 2 | 1 | -1 | -2 | -2 |
| 80 | 0 | 0 | -1 | -4 | -5 | -6 | -3 | 1 | 1 | 1 | -2 | -4 | -4 | -2 | 1 | 2 | 2 | -1 | -3 | -2 | -2 | 1 | 2 | 3 | 1 | -1 | -1 | -1 |

DECEMBER

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | 0 | 1 | 1 | 0 | -1 | 0 | -1 | -1 | 1 | 2 | 1 | 0 | 0 | -1 | -1 | 1 | 2 | 3 | 1 | 0 | -1 | -2 | -1 | 1 | 2 | 1 | 0 |
| 20 | -1 | 0 | 0 | 1 | 0 | -1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 |
| 24 | 0 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -1 | 0 | -1 | -1 | -2 | -3 | -3 | -2 | 0 | -1 | -2 | -3 | -4 | -4 | -3 |
| 28 | 0 | -1 | -3 | -4 | -4 | -3 | -1 | 0 | 0 | -3 | -5 | -6 | -6 | -3 | 0 | 0 | -2 | -5 | -6 | -6 | -4 | 0 | 0 | -1 | -5 | -7 | -7 | -5 |
| 32 | 0 | -1 | -4 | -7 | -7 | -6 | -2 | 1 | 0 | -3 | -7 | -9 | -8 | -4 | 1 | 1 | -1 | -5 | -8 | -8 | -6 | 1 | 1 | 0 | -4 | -8 | -8 | -6 |
| 36 | 0 | -1 | -4 | -9 | -10 | -8 | -3 | 1 | 1 | -2 | -8 | -10 | -9 | -5 | 1 | 2 | 0 | -5 | -8 | -9 | -6 | 1 | 2 | 1 | -3 | -7 | -8 | -6 |
| 40 | 1 | 0 | -4 | -10 | -11 | -9 | -4 | 1 | 2 | 0 | -7 | -10 | -9 | -6 | 1 | 2 | 2 | -3 | -7 | -8 | -6 | 1 | 2 | 2 | -1 | -5 | -7 | -6 |
| 44 | 1 | 0 | -3 | -9 | -11 | -9 | -5 | 1 | 2 | 1 | -5 | -9 | -9 | -6 | 1 | 3 | 4 | -1 | -6 | -8 | -6 | 1 | 2 | 3 | 1 | -3 | -5 | -5 |
| 48 | 1 | 1 | -3 | -9 | -11 | -9 | -5 | 1 | 3 | 2 | -4 | -9 | -9 | -6 | 1 | 3 | 5 | 0 | -5 | -7 | -5 | 1 | 2 | 4 | 2 | -1 | -4 | -4 |
| 52 | 1 | 1 | -2 | -8 | -11 | -10 | -5 | 2 | 4 | 3 | -3 | -8 | -9 | -6 | 1 | 4 | 6 | 2 | -4 | -6 | -5 | 1 | 2 | 4 | 3 | 0 | -3 | -4 |
| 56 | 1 | 2 | -1 | -7 | -11 | -10 | -6 | 2 | 4 | 4 | -2 | -7 | -8 | -5 | 1 | 4 | 6 | 3 | -3 | -5 | -4 | 1 | 2 | 5 | 4 | 1 | -2 | -3 |
| 60 | 1 | 2 | 0 | -7 | -10 | -10 | -6 | 2 | 4 | 5 | -1 | -6 | -8 | -5 | 1 | 4 | 7 | 3 | -2 | -5 | -4 | 1 | 2 | 5 | 5 | 2 | -1 | -3 |
| 64 | 1 | 3 | 0 | -6 | -9 | -9 | -6 | 2 | 4 | 6 | 0 | -5 | -7 | -5 | 1 | 4 | 7 | 4 | -1 | -4 | -3 | 0 | 2 | 5 | 5 | 3 | -1 | -2 |
| 68 | 1 | 3 | 1 | -5 | -8 | -8 | -5 | 2 | 5 | 6 | 1 | -4 | -6 | -4 | 1 | 4 | 8 | 5 | 0 | -3 | -3 | 0 | 1 | 5 | 5 | 3 | 0 | -2 |
| 72 | 1 | 3 | 1 | -4 | -7 | -8 | -5 | 2 | 5 | 7 | 1 | -4 | -5 | -4 | 1 | 4 | 8 | 5 | 1 | -2 | -3 | 0 | 1 | 5 | 5 | 3 | 0 | -2 |
| 76 | 1 | 3 | 2 | -4 | -6 | -7 | -4 | 2 | 5 | 7 | 1 | -3 | -5 | -4 | 1 | 4 | 8 | 5 | 1 | -2 | -2 | 0 | 1 | 5 | 5 | 3 | 0 | -1 |
| 80 | 1 | 3 | 2 | -3 | -6 | -6 | -4 | 2 | 5 | 7 | 1 | -2 | -4 | -3 | 1 | 5 | 8 | 5 | 1 | -2 | -2 | 0 | 2 | 5 | 5 | 3 | 0 | -1 |

### SEPTEMBER

| KM LAT | LONGITUDE 60 E 20 | 30 | 40 | 50 | 60 | 70 | 80 | LONGITUDE 90 E 20 | 30 | 40 | 50 | 60 | 70 | 80 | LONGITUDE 120 E 20 | 30 | 40 | 50 | 60 | 70 | 80 | LONGITUDE 150 E 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 28 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 32 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 36 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 40 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 44 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 48 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 52 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| 68 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| 72 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 1 | 0 |
| 76 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 1 | 0 |
| 80 | -1 | -1 | 0 | 1 | 1 | 0 | 1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 1 | 0 |

### OCTOBER

| KM LAT | 60E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 1 | 1 | 0 | -2 | -2 | -2 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| 20 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 1 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 24 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 1 | 1 | 2 | 3 | 1 |
| 28 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -1 | -2 | -3 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | 5 | 3 |
| 32 | 0 | 0 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 5 | 8 | 8 | 5 |
| 36 | 0 | 0 | 1 | 0 | -1 | -2 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | 1 | -1 | -1 | 1 | 4 | 6 | 6 | 3 | 0 | -1 | 1 | 5 | 10 | 11 | 6 |
| 40 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | -1 | 0 | 2 | 4 | 5 | 4 | 2 | -1 | -1 | 2 | 5 | 8 | 9 | 5 | 0 | -1 | 1 | 6 | 11 | 12 | 7 |
| 44 | -1 | 0 | 2 | 3 | 2 | 1 | 0 | -1 | 0 | 2 | 5 | 7 | 6 | 3 | -1 | -1 | 2 | 6 | 10 | 11 | 6 | -1 | -1 | 1 | 5 | 11 | 12 | 7 |
| 48 | -1 | 0 | 2 | 4 | 3 | 2 | 1 | -1 | 0 | 2 | 6 | 8 | 8 | 4 | -1 | -1 | 2 | 7 | 12 | 12 | 7 | -1 | -1 | 1 | 5 | 10 | 11 | 7 |
| 52 | -1 | 0 | 2 | 4 | 4 | 3 | 1 | -1 | 0 | 2 | 6 | 9 | 9 | 4 | -1 | -1 | 2 | 7 | 12 | 12 | 7 | -1 | -1 | 1 | 5 | 10 | 11 | 6 |
| 56 | -1 | 0 | 3 | 5 | 5 | 4 | 2 | -1 | 0 | 3 | 7 | 10 | 9 | 5 | -1 | -1 | 2 | 7 | 11 | 11 | 6 | -1 | -1 | 0 | 5 | 9 | 10 | 6 |
| 60 | -1 | 0 | 3 | 5 | 6 | 4 | 2 | -1 | 0 | 3 | 7 | 10 | 8 | 4 | -1 | -1 | 1 | 6 | 10 | 10 | 6 | -1 | -1 | 0 | 4 | 8 | 9 | 6 |
| 64 | -1 | 0 | 3 | 5 | 6 | 3 | 2 | -1 | 0 | 2 | 6 | 9 | 7 | 4 | -1 | -1 | 1 | 5 | 9 | 8 | 5 | -1 | -1 | 0 | 3 | 7 | 8 | 5 |
| 68 | -1 | 0 | 3 | 5 | 5 | 2 | 2 | -1 | 0 | 2 | 6 | 8 | 6 | 4 | -1 | -1 | 1 | 4 | 8 | 7 | 5 | -1 | -1 | 0 | 3 | 6 | 7 | 5 |
| 72 | -1 | 0 | 2 | 5 | 5 | 1 | 2 | -1 | 0 | 2 | 5 | 7 | 5 | 4 | -1 | -1 | 1 | 4 | 7 | 6 | 4 | -1 | -1 | -1 | 2 | 6 | 7 | 4 |
| 76 | -1 | 0 | 2 | 4 | 4 | 0 | 2 | -1 | -1 | 1 | 4 | 6 | 3 | 3 | -1 | -1 | 0 | 4 | 7 | 6 | 4 | -1 | -1 | 0 | 2 | 6 | 7 | 4 |
| 80 | -1 | 0 | 1 | 4 | 4 | -1 | 2 | -1 | -1 | 1 | 4 | 6 | 2 | 3 | -1 | -1 | 0 | 4 | 7 | 5 | 4 | -1 | -1 | 0 | 2 | 6 | 6 | 4 |

### NOVEMBER

| KM LAT | 60E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -1 | -2 | -2 | -2 | -1 | 1 | 0 | -2 | -3 | -4 | -4 | -2 | 1 | 1 | -1 | -3 | -4 | -3 | -2 | 1 | 2 | 0 | -1 | -1 | -1 | -1 |
| 20 | 0 | -1 | -1 | -2 | -3 | -3 | -2 | 1 | 0 | -1 | -3 | -5 | -5 | -3 | 1 | 1 | -1 | -2 | -4 | -3 | -2 | 1 | 1 | 1 | 0 | -1 | -1 | 0 |
| 24 | 0 | 0 | -1 | -4 | -6 | -6 | -4 | 0 | 0 | -1 | -3 | -6 | -7 | -4 | 0 | 1 | 1 | -1 | -3 | -4 | -2 | 0 | 1 | 3 | 5 | 5 | 4 | 2 |
| 28 | 0 | 0 | -1 | -4 | -8 | -9 | -6 | 0 | 0 | 0 | -2 | -6 | -7 | -5 | 0 | 0 | 2 | 1 | -1 | -3 | -2 | -1 | 0 | 3 | 7 | 9 | 7 | 3 |
| 32 | 0 | 1 | 0 | -4 | -9 | -10 | -6 | 0 | 1 | 2 | -1 | -5 | -7 | -4 | 0 | 0 | 3 | 4 | 2 | -1 | -1 | -1 | 0 | 3 | 9 | 12 | 10 | 5 |
| 36 | 1 | 2 | 1 | -3 | -8 | -9 | -6 | 0 | 1 | 3 | 1 | -3 | -5 | -3 | -1 | 0 | 4 | 7 | 7 | 5 | 2 | -1 | -1 | 3 | 9 | 13 | 12 | 7 |
| 40 | 1 | 2 | 2 | -2 | -7 | -8 | -5 | 0 | 2 | 4 | 3 | -1 | -3 | -2 | -1 | 0 | 3 | 7 | 8 | 7 | 3 | -1 | -1 | 2 | 8 | 14 | 13 | 7 |
| 44 | 1 | 3 | 3 | -1 | -5 | -7 | -4 | 0 | 2 | 4 | 4 | 1 | -1 | -1 | -1 | 0 | 3 | 7 | 10 | 8 | 4 | -2 | -1 | 2 | 8 | 14 | 13 | 7 |
| 48 | 1 | 3 | 3 | 0 | -4 | -5 | -3 | 0 | 2 | 4 | 4 | 3 | 1 | 0 | -1 | 0 | 3 | 7 | 11 | 9 | 4 | -2 | -1 | 1 | 7 | 14 | 14 | 7 |
| 52 | 1 | 3 | 4 | 1 | -2 | -4 | -3 | 0 | 1 | 4 | 5 | 4 | 2 | 1 | -1 | -1 | 2 | 8 | 12 | 10 | 4 | -2 | -1 | 1 | 7 | 14 | 14 | 7 |
| 56 | 1 | 2 | 4 | 2 | -1 | -3 | -2 | 0 | 1 | 4 | 6 | 6 | 3 | 1 | -1 | -1 | 2 | 8 | 12 | 10 | 5 | -1 | -1 | 0 | 7 | 14 | 13 | 6 |
| 60 | 1 | 2 | 4 | 3 | 0 | -2 | -1 | 0 | 1 | 3 | 6 | 7 | 4 | 2 | -1 | -1 | 1 | 7 | 11 | 10 | 5 | -1 | -1 | 0 | 6 | 12 | 12 | 6 |
| 64 | 1 | 1 | 3 | 4 | 2 | -1 | -1 | 0 | 0 | 3 | 6 | 7 | 5 | 2 | 0 | -1 | 1 | 6 | 10 | 9 | 4 | -1 | -1 | 0 | 5 | 11 | 11 | 6 |
| 68 | 0 | 1 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 2 | 6 | 7 | 5 | 2 | -1 | -1 | 0 | 5 | 9 | 8 | 4 | -1 | -1 | 0 | 5 | 9 | 10 | 5 |
| 72 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | -1 | 1 | 5 | 6 | 4 | 2 | -1 | -2 | 0 | 4 | 7 | 7 | 4 | -1 | -1 | 0 | 4 | 8 | 8 | 5 |
| 76 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | -1 | -1 | 1 | 4 | 5 | 4 | 2 | -1 | -2 | 0 | 4 | 7 | 7 | 4 | -1 | -2 | -1 | 3 | 6 | 7 | 4 |
| 80 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 3 | 4 | 3 | 1 | -1 | -1 | 3 | 6 | 5 | 3 |  | -1 | -2 | -1 | 3 | 6 | 7 | 4 |

### DECEMBER

| KM LAT | 60E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -2 | -1 | -1 | -1 | -1 | 1 | 0 | -2 | -3 | -4 | -3 | -1 | 1 | 1 | -2 | -4 | -4 | -3 | -1 | 1 | 2 | 0 | -2 | -2 | -1 | 0 |
| 20 | 0 | -1 | -2 | -2 | -3 | -2 | -2 | 0 | 0 | -2 | -4 | -5 | -4 | -2 | 0 | 0 | 0 | -2 | -4 | -4 | -2 | 1 | 2 | 0 | -1 | -1 | 0 | 0 |
| 24 | 0 | 0 | -2 | -4 | -6 | -6 | -4 | 0 | 0 | -1 | -4 | -7 | -7 | -4 | 0 | 0 | 1 | 1 | -2 | -3 | -1 | 0 | 1 | 3 | 5 | 6 | 5 | 3 |
| 28 | 0 | 0 | -1 | -5 | -8 | -8 | -5 | 0 | 0 | 0 | -3 | -7 | -7 | -4 | 0 | 1 | 3 | 1 | 0 | 0 |  | 0 | 0 | 4 | 9 | 10 | 8 | 5 |
| 32 | 0 | 1 | 0 | -4 | -8 | -8 | -5 | 0 | 1 | 1 | -1 | -5 | -6 | -3 | 0 | 1 | 3 | 6 | 4 | 3 | 2 | -1 | 0 | 4 | 10 | 12 | 11 | 7 |
| 36 | 0 | 1 | 1 | -2 | -6 | -6 | -5 | 0 | 1 | 2 | 3 | 0 | 0 | -1 | 0 | 1 | 4 | 7 | 6 | 6 | 4 | -1 | 0 | 4 | 11 | 13 | 12 | 8 |
| 40 | 0 | 1 | 2 | 1 | -3 | -4 | -4 | 0 | 1 | 2 | 4 | 2 | 2 | 0 | 0 | 1 | 3 | 7 | 8 | 7 | 5 | -1 | 0 | 4 | 10 | 13 | 13 | 8 |
| 44 | 0 | 1 | 2 | 2 | -1 | -3 | -3 | 0 | 1 | 2 | 4 | 2 | 2 | 0 | 0 | 0 | 3 | 7 | 8 | 8 | 5 | -1 | 0 | 3 | 9 | 12 | 12 | 8 |
| 48 | 0 | 1 | 2 | 3 | 1 | -1 | -2 | 0 | 0 | 2 | 4 | 5 | 4 | 1 | 0 | 0 | 2 | 6 | 8 | 9 | 5 | -1 | -1 | 2 | 8 | 11 | 12 | 8 |
| 52 | 0 | 1 | 2 | 4 | 2 | 0 | -2 | 0 | 0 | 1 | 4 | 5 | 4 | 1 | -1 | -1 | 0 | 5 | 8 | 8 | 5 | -1 | -1 | 1 | 7 | 10 | 11 | 8 |
| 56 | 0 | 0 | 2 | 4 | 3 | 1 | -1 | -1 | -1 | 1 | 4 | 5 | 5 | 2 | -1 | -1 | 0 | 5 | 8 | 8 | 5 | -1 | -1 | 0 | 5 | 9 | 11 | 7 |
| 60 | 0 | 0 | 2 | 4 | 2 | 1 | -1 | -1 | -2 | -1 | 3 | 5 | 5 | 2 | -1 | -2 | -1 | 3 | 7 | 8 | 5 | -1 | -2 | 0 | 4 | 8 | 10 | 7 |
| 64 | -1 | -1 | 1 | 4 | 4 | 2 | -1 | -1 | -2 | -1 | 3 | 5 | 5 | 2 | -1 | -2 | -1 | 3 | 5 | 7 | 4 | 0 | -2 | -1 | 3 | 6 | 9 | 7 |
| 68 | -1 | -1 | 1 | 3 | 4 | 2 | -1 | -1 | -3 | -2 | 1 | 3 | 3 | 1 | -1 | -3 | -2 | 1 | 3 | 5 | 4 | 0 | -2 | -1 | 2 | 5 | 7 | 6 |
| 72 | -1 | -2 | 0 | 2 | 3 | 1 | -1 | -1 | -3 | -3 | -1 | 1 | 2 | 1 | -1 | -3 | -2 | 0 | 2 | 4 | 3 | -1 | -2 | -1 | 1 | 4 | 5 | 5 |
| 76 | -1 | -2 | 0 | 2 | 2 | 1 | -1 | -1 | -3 | -3 | -1 | 1 | 2 | 1 | -1 | -3 | -2 | 0 | 2 | 4 | 3 | -1 | -2 | -1 | 1 | 3 | 4 | 5 |
| 80 | -1 | -2 | 0 | 1 | 1 | 0 | -1 | -2 | -4 | -3 | -2 | -1 | 1 | 0 | -1 | -4 | -2 | -1 | 0 | 3 | 3 | -1 | -2 | -1 | 1 | 3 | 4 | 5 |

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|  | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**JANUARY**

| LAT | 180/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | 1 | 2 | 4 | 3 | 1 | 0 | 1 | 1 | 3 | 4 | 3 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 |
| 20 | 1 | 1 | 2 | 4 | 6 | 6 | 3 | 0 | 1 | 2 | 4 | 6 | 5 | 3 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | -1 | -3 | -3 | -1 |
| 24 | 1 | 1 | 3 | 7 | 12 | 12 | 7 | 0 | 1 | 2 | 6 | 10 | 11 | 7 | 0 | 0 | 1 | 2 | 3 | 4 | 3 | 0 | -1 | -1 | -2 | -4 | -4 | -1 |
| 28 | 0 | 1 | 4 | 10 | 17 | 18 | 10 | 0 | 1 | 3 | 7 | 13 | 15 | 9 | 0 | 0 | 0 | 1 | 3 | 5 | 4 | 0 | -1 | -2 | -4 | -6 | -5 | -1 |
| 32 | 0 | 1 | 4 | 12 | 20 | 21 | 12 | 0 | 0 | 2 | 7 | 14 | 16 | 10 | 0 | -1 | -2 | 0 | 2 | 5 | 4 | 0 | -1 | -3 | -6 | -7 | -6 | -2 |
| 36 | 0 | 0 | 3 | 11 | 20 | 21 | 12 | 0 | -1 | 0 | 5 | 13 | 15 | 9 | 0 | -2 | -3 | -3 | 0 | 3 | 3 | 0 | -2 | -4 | -7 | -8 | -7 | -3 |
| 40 | 0 | -1 | 2 | 9 | 18 | 19 | 12 | -1 | -2 | -2 | 3 | 10 | 12 | 8 | -1 | -2 | -5 | -4 | -2 | 1 | 2 | 0 | -2 | -5 | -8 | -9 | -7 | -4 |
| 44 | -1 | -1 | 0 | 6 | 15 | 17 | 11 | -1 | -3 | -3 | 0 | 6 | 9 | 7 | -1 | -3 | -6 | -6 | -3 | -1 | 1 | 0 | -1 | -5 | -8 | -9 | -8 | -5 |
| 48 | -1 | -2 | -1 | 4 | 12 | 14 | 10 | -1 | -3 | -4 | -2 | 4 | 7 | 6 | -1 | -3 | -6 | -7 | -5 | -2 | 0 | 0 | -1 | -4 | -8 | -9 | -8 | -5 |
| 52 | -1 | -2 | -2 | 3 | 9 | 11 | 9 | -1 | -3 | -5 | -4 | 1 | 5 | 5 | -1 | -3 | -6 | -8 | -6 | -3 | 0 | 0 | -1 | -4 | -8 | -9 | -8 | -5 |
| 56 | -1 | -2 | -2 | 1 | 7 | 9 | 7 | -1 | -3 | -5 | -4 | 0 | 3 | 4 | -1 | -3 | -6 | -8 | -6 | -3 | -1 | 0 | -1 | -4 | -7 | -8 | -7 | -5 |
| 60 | -1 | -2 | -2 | 0 | 5 | 7 | 6 | -1 | -3 | -5 | -5 | -1 | 3 | 4 | -1 | -3 | -6 | -7 | -6 | -3 | -1 | 0 | 0 | -4 | -6 | -7 | -6 | -4 |
| 64 | -1 | -2 | -2 | 0 | 4 | 6 | 5 | -1 | -3 | -5 | -5 | -1 | 2 | 3 | 0 | -2 | -5 | -6 | -5 | -2 | -1 | 0 | 0 | -3 | -5 | -5 | -5 | -3 |
| 68 | -1 | -2 | -2 | 0 | 3 | 5 | 4 | -1 | -3 | -4 | -4 | -1 | 3 | 2 | 0 | -2 | -5 | -5 | -3 | -1 | 0 | 1 | 0 | -3 | -4 | -3 | -3 | -2 |
| 72 | -1 | -2 | -2 | 0 | 3 | 5 | 4 | -1 | -3 | -4 | -3 | 0 | 3 | 2 | 0 | -2 | -5 | -4 | -2 | 0 | 0 | 1 | 0 | -3 | -3 | -2 | -2 | -2 |
| 76 | -1 | -2 | -2 | 1 | 4 | 6 | 4 | -1 | -2 | -4 | -2 | 1 | 4 | 3 | 0 | -2 | -5 | -3 | -1 | 1 | 1 | 1 | 0 | -3 | -2 | -1 | -1 | -1 |
| 80 | -1 | -2 | -2 | 2 | 5 | 6 | 4 | -1 | -2 | -4 | -1 | 3 | 5 | 3 | 0 | -2 | -5 | -2 | 1 | 2 | 1 | 1 | 0 | -3 | -2 | 0 | 0 | 0 |

**FEBRUARY**

| LAT | 180/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 4 | 3 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 | -1 |
| 20 | 1 | 1 | 1 | 3 | 5 | 5 | 3 | 1 | 1 | 1 | 3 | 6 | 5 | 3 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 24 | 0 | 1 | 2 | 4 | 9 | 9 | 5 | 0 | 1 | 2 | 5 | 9 | 9 | 6 | 0 | 0 | 1 | 3 | 5 | 5 | 4 | 0 | 0 | 0 | 0 | -1 | 0 | 1 |
| 28 | 0 | 1 | 3 | 7 | 12 | 12 | 7 | 0 | 1 | 3 | 7 | 12 | 12 | 7 | 0 | 0 | 1 | 3 | 5 | 7 | 5 | 0 | -1 | -1 | -1 | -2 | 0 | 2 |
| 32 | 0 | 1 | 3 | 8 | 14 | 14 | 8 | 0 | 0 | 2 | 7 | 12 | 13 | 8 | 0 | 0 | 0 | 2 | 5 | 7 | 5 | 0 | -1 | -1 | -2 | -2 | 0 | 1 |
| 36 | 0 | 0 | 2 | 7 | 14 | 14 | 8 | 0 | 0 | 1 | 5 | 12 | 12 | 7 | 0 | 0 | 0 | 1 | 3 | 5 | 4 | 0 | 0 | -1 | -3 | -4 | -1 | 1 |
| 40 | 0 | 0 | 1 | 6 | 12 | 12 | 8 | 0 | 0 | 1 | 4 | 8 | 10 | 6 | 0 | -1 | -1 | 0 | 2 | 4 | 3 | 0 | -1 | -2 | -4 | -4 | -2 | 0 |
| 44 | 0 | 0 | 0 | 5 | 11 | 10 | 7 | 0 | 0 | 0 | 3 | 7 | 6 | 4 | 0 | 0 | 0 | -1 | 0 | 1 | 2 | 0 | -1 | -1 | -4 | -6 | -3 | 0 |
| 48 | 0 | 0 | 0 | 4 | 8 | 8 | 6 | 0 | -1 | -1 | 2 | 4 | 5 | 4 | 0 | -1 | -1 | -1 | -1 | 0 | 1 | 0 | -1 | -2 | -5 | -6 | -4 | -1 |
| 52 | 0 | -1 | -1 | 3 | 7 | 7 | 6 | 0 | -1 | -1 | 1 | 3 | 3 | 3 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -5 | -6 | -4 | -1 |
| 56 | 0 | -1 | 0 | 3 | 6 | 5 | 5 | 0 | -1 | -1 | 1 | 2 | 2 | 2 | 0 | -1 | -2 | -2 | -3 | -2 | 0 | 0 | -1 | -3 | -5 | -6 | -4 | -1 |
| 60 | 0 | -1 | -1 | 2 | 4 | 4 | 4 | 0 | 0 | -1 | 0 | 1 | 1 | 2 | 0 | -1 | -1 | -2 | -3 | -2 | 0 | 0 | -1 | -2 | -5 | -6 | -4 | -1 |
| 64 | 0 | 0 | -1 | 1 | 3 | 3 | 3 | 0 | -1 | 0 | 0 | 1 | 0 | 1 | 0 | -1 | -1 | -2 | -3 | -2 | 0 | 0 | -1 | -2 | -4 | -5 | -3 | -1 |
| 68 | 0 | 0 | -1 | 1 | 2 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -3 | -1 | 0 | 0 | -1 | -1 | -3 | -4 | -2 | -1 |
| 72 | 0 | 0 | -1 | 0 | 2 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -1 | 0 | 0 | -1 | -1 | -2 | -3 | -1 | 0 |
| 76 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | -1 | -2 | -1 | 1 | 0 |
| 80 | 1 | 0 | -1 | 1 | 2 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 2 | 1 |

**MARCH**

| LAT | 180/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | 1 | 1 | 3 | 4 | 3 | 0 | 1 | 1 | 2 | 4 | 5 | 3 | 0 | 0 | 1 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | -1 | 0 |
| 20 | 1 | 1 | 1 | 2 | 4 | 6 | 4 | 0 | 1 | 2 | 3 | 6 | 6 | 4 | 0 | 0 | 1 | 2 | 3 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 24 | 0 | 1 | 2 | 4 | 7 | 8 | 6 | 0 | 1 | 2 | 5 | 8 | 10 | 6 | 0 | 0 | 1 | 3 | 6 | 7 | 5 | 0 | 0 | 0 | 1 | 2 | 2 | 2 |
| 28 | 0 | 1 | 2 | 6 | 10 | 11 | 7 | 0 | 1 | 2 | 6 | 11 | 12 | 8 | 0 | 0 | 1 | 4 | 7 | 9 | 6 | 0 | 0 | 0 | 1 | 3 | 4 | 3 |
| 32 | 0 | 0 | 2 | 6 | 11 | 12 | 7 | 0 | 0 | 2 | 6 | 11 | 12 | 8 | 0 | 0 | 0 | 3 | 7 | 9 | 6 | 0 | -1 | -1 | 0 | 2 | 4 | 3 |
| 36 | 0 | 0 | 1 | 5 | 10 | 11 | 7 | 0 | 0 | 1 | 4 | 10 | 11 | 7 | 0 | -1 | -1 | 2 | 6 | 7 | 5 | 0 | -1 | -2 | -1 | 1 | 2 | 2 |
| 40 | 0 | -1 | 0 | 4 | 8 | 9 | 5 | 0 | -1 | 0 | 3 | 7 | 9 | 6 | 0 | -1 | -1 | 0 | 3 | 5 | 4 | 0 | -1 | -2 | -3 | -1 | 0 | 1 |
| 44 | 0 | -1 | -1 | 2 | 6 | 7 | 4 | 0 | -1 | -1 | 1 | 5 | 6 | 4 | 0 | -1 | -2 | -1 | 1 | 3 | 3 | 0 | -1 | -3 | -4 | -3 | -1 | 0 |
| 48 | 0 | -1 | -1 | 1 | 5 | 5 | 3 | 0 | -1 | -2 | 0 | 3 | 4 | 3 | 0 | -1 | -2 | -2 | 0 | 1 | 2 | 0 | -1 | -3 | -4 | -4 | -2 | 0 |
| 52 | 0 | -1 | -1 | 0 | 3 | 4 | 2 | 0 | -1 | -2 | -1 | 1 | 3 | 2 | 0 | -1 | -3 | -3 | -2 | 0 | 1 | 0 | -1 | -3 | -5 | -5 | -3 | -1 |
| 56 | 0 | -1 | -2 | -1 | 2 | 2 | 1 | 0 | -1 | -2 | -2 | 0 | 1 | 2 | 0 | -1 | -3 | -4 | -3 | -1 | 1 | 0 | -1 | -3 | -5 | -5 | -3 | -1 |
| 60 | 0 | -1 | -2 | -2 | 0 | 0 | 0 | 0 | -1 | -3 | -3 | -2 | 0 | 1 | 0 | -1 | -3 | -4 | -3 | -2 | 0 | 0 | -1 | -3 | -4 | -4 | -3 | -1 |
| 64 | 0 | -1 | -3 | -2 | -2 | -1 | -1 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | -3 | -3 | -3 | -2 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 |
| 68 | 0 | -1 | -3 | -3 | -2 | -2 | -1 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -2 | 0 |
| 72 | 0 | -1 | -3 | -3 | -3 | -2 | -2 | 0 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 1 | 0 | -1 | -2 | -2 | -1 | -1 | 1 |
| 76 | 0 | -1 | -3 | -3 | -3 | -2 | -2 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 1 | 0 | -2 | -2 | -1 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | 1 |
| 80 | 0 | -1 | -3 | -3 | -2 | -2 | -2 | 0 | 0 | -2 | -2 | -1 | -1 | 0 | 1 | 0 | -2 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 |

**APRIL**

| LAT | 180/20 | 30 | 40 | 50 | 60 | 70 | 80 | 150/20 | 30 | 40 | 50 | 60 | 70 | 80 | 120/20 | 30 | 40 | 50 | 60 | 70 | 80 | 90/20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 |
| 20 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 24 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 28 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 32 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 36 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 68 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 72 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 76 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| 80 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |

## JANUARY

| KM LAT= | \| LONGITUDE 60 W |||||| | \| LONGITUDE 30 W |||||| | \| LONGITUDE 0 DEG |||||| | \| LONGITUDE 30 E |||||| |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 |
| 20 | 0 | 0 | 0 | -2 | -4 | -4 | -2 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| 24 | 0 | -1 | -1 | -4 | -7 | -7 | -3 | 0 | 0 | -1 | -2 | -5 | -6 | -4 | 0 | 0 | -1 | -1 | -3 | -4 | -4 | 0 | -1 | -1 | -2 | -4 | -5 | -4 |
| 28 | 0 | -1 | -2 | -5 | -9 | -9 | -5 | 0 | 0 | -1 | -4 | -7 | -9 | -6 | 0 | 0 | -1 | -3 | -5 | -7 | -6 | 0 | 0 | -1 | -4 | -7 | -8 | -6 |
| 32 | 0 | -1 | -3 | -6 | -10 | -10 | -6 | 0 | 0 | -1 | -4 | -9 | -10 | -8 | 1 | 1 | 0 | -3 | -7 | -9 | -8 | 0 | 0 | -1 | -4 | -8 | -9 | -7 |
| 36 | 0 | 0 | -2 | -6 | -11 | -11 | -7 | 1 | 1 | 0 | -4 | -9 | -11 | -8 | 1 | 2 | 1 | -2 | -7 | -10 | -8 | 0 | 1 | 0 | -3 | -7 | -9 | -7 |
| 40 | 0 | 0 | -2 | -6 | -10 | -11 | -7 | 1 | 2 | 1 | -3 | -9 | -11 | -8 | 1 | 2 | 3 | -1 | -7 | -10 | -8 | 0 | 1 | 1 | -2 | -6 | -8 | -6 |
| 44 | 1 | 1 | -1 | -5 | -10 | -11 | -8 | 1 | 2 | 3 | -2 | -8 | -10 | -8 | 1 | 3 | 4 | 0 | -6 | -9 | -7 | 0 | 1 | 2 | 0 | -4 | -6 | -5 |
| 48 | 1 | 1 | 0 | -5 | -9 | -10 | -8 | 1 | 3 | 3 | -1 | -7 | -9 | -8 | 1 | 3 | 4 | 1 | -4 | -7 | -6 | 0 | 1 | 3 | 1 | -3 | -5 | -4 |
| 52 | 1 | 2 | 0 | -4 | -8 | -9 | -7 | 1 | 3 | 4 | 0 | -5 | -8 | -7 | 1 | 3 | 5 | 2 | -3 | -6 | -5 | 0 | 1 | 3 | 2 | -2 | -3 | -3 |
| 56 | 1 | 2 | 0 | -3 | -7 | -8 | -7 | 1 | 3 | 4 | 1 | -4 | -7 | -6 | 1 | 2 | 5 | 3 | -2 | -5 | -4 | 0 | 1 | 3 | 2 | -1 | -2 | -2 |
| 60 | 1 | 2 | 0 | -2 | -5 | -7 | -6 | 1 | 3 | 4 | 2 | -3 | -6 | -5 | 1 | 2 | 5 | 3 | -2 | -4 | -4 | 0 | 1 | 3 | 2 | -1 | -2 | -2 |
| 64 | 1 | 2 | 0 | -1 | -3 | -5 | -5 | 1 | 3 | 4 | 2 | -2 | -5 | -4 | 0 | 2 | 4 | 3 | -2 | -3 | -3 | 0 | 1 | 3 | 1 | -2 | -2 | -2 |
| 68 | 1 | 2 | 1 | 0 | -2 | -4 | -3 | 1 | 3 | 4 | 2 | -1 | -4 | -3 | 0 | 2 | 4 | 2 | -2 | -3 | -3 | 0 | 1 | 3 | 1 | -2 | -2 | -2 |
| 72 | 1 | 2 | 1 | 0 | -1 | -3 | -2 | 1 | 2 | 4 | 2 | -1 | -3 | -3 | 0 | 2 | 4 | 1 | -2 | -3 | -3 | 0 | 1 | 3 | 0 | -3 | -3 | -3 |
| 76 | 1 | 2 | 1 | 0 | -1 | -2 | -2 | 1 | 3 | 4 | 1 | -2 | -3 | -3 | 0 | 2 | 4 | 1 | -3 | -3 | -3 | 0 | 1 | 3 | -1 | -4 | -4 | -3 |
| 80 | 1 | 2 | 1 | 0 | -1 | -2 | -2 | 1 | 3 | 4 | 1 | -2 | -3 | -3 | 1 | 2 | 5 | 0 | -4 | -4 | -4 | 0 | 1 | 3 | -1 | -5 | -5 | -4 |

## FEBRUARY

| KM LAT= | \| LONGITUDE 60 W |||||| | \| LONGITUDE 30 W |||||| | \| LONGITUDE 0 DEG |||||| | \| LONGITUDE 30 E |||||| |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | -1 | 0 | 0 | -1 | -2 | -2 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 1 | 0 |
| 20 | -1 | 0 | 0 | -1 | -2 | -2 | 0 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | -1 | -1 |
| 24 | 0 | -1 | -1 | -1 | -3 | -2 | -1 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -1 | -1 | -1 | -1 | 0 | -2 | -3 | 0 | 0 | -1 | -1 | -2 | -4 | -4 |
| 28 | 0 | -1 | -2 | -3 | -4 | -3 | -1 | -1 | 0 | -1 | -2 | -3 | -4 | -3 | 0 | 0 | -1 | -2 | -2 | -4 | -5 | 0 | -1 | -2 | -4 | -6 | -6 | -6 |
| 32 | 0 | -1 | -2 | -4 | -5 | -4 | -1 | 0 | 0 | -2 | -4 | -5 | -6 | -3 | 0 | 0 | -1 | -3 | -4 | -6 | -5 | 0 | 0 | -1 | -3 | -6 | -7 | -7 |
| 36 | 0 | -1 | -2 | -5 | -7 | -4 | -1 | 0 | -1 | -2 | -5 | -6 | -6 | -4 | 0 | 0 | -1 | -4 | -4 | -7 | -6 | 0 | 0 | 0 | -3 | -5 | -8 | -7 |
| 40 | 0 | 0 | -3 | -5 | -7 | -5 | -2 | 0 | 0 | -2 | -5 | -7 | -7 | -4 | 0 | 0 | -1 | -4 | -6 | -7 | -6 | 0 | 0 | 0 | -2 | -5 | -7 | -7 |
| 44 | 0 | -1 | -2 | -6 | -8 | -5 | -2 | 0 | 0 | -2 | -5 | -7 | -7 | -4 | 0 | 1 | -1 | -3 | -5 | -7 | -6 | 0 | 1 | 1 | 0 | -3 | -6 | -6 |
| 48 | 0 | 0 | -3 | -6 | -8 | -6 | -2 | 0 | 0 | -2 | -5 | -7 | -7 | -4 | 0 | 1 | 0 | -3 | -5 | -6 | -6 | 0 | 1 | 2 | 0 | -3 | -5 | -6 |
| 52 | 0 | -1 | -2 | -6 | -8 | -6 | -2 | 0 | 0 | -2 | -5 | -6 | -6 | -4 | 1 | 1 | -1 | -2 | -4 | -5 | -5 | 0 | 1 | 2 | 1 | -1 | -4 | -5 |
| 56 | 0 | -1 | -3 | -6 | -7 | -5 | -2 | 0 | 0 | -2 | -5 | -5 | -5 | -3 | 0 | 1 | 0 | -2 | -2 | -4 | -4 | 1 | 1 | 2 | 2 | 0 | -2 | -4 |
| 60 | 0 | -1 | -3 | -6 | -6 | -4 | -2 | 1 | -1 | -3 | -4 | -3 | -3 | -2 | 1 | 1 | -1 | -1 | -1 | -3 | -3 | 2 | 2 | 2 | 2 | 1 | -1 | -4 |
| 64 | -1 | -1 | -3 | -5 | -4 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -2 | -2 | 0 | 1 | 0 | 0 | 1 | -1 | -3 | 1 | 1 | 3 | 3 | 2 | -1 | -3 |
| 68 | 0 | -2 | -3 | -4 | -2 | -1 | -1 | 0 | -1 | -2 | -2 | 0 | 0 | -1 | 0 | 0 | 0 | 1 | 2 | 0 | -1 | 0 | 2 | 2 | 3 | 2 | 0 | -2 |
| 72 | -1 | -1 | -2 | -3 | -2 | 1 | 0 | 0 | -1 | -2 | -1 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 4 | 1 | -1 | 1 | 2 | 2 | 3 | 3 | 0 | -2 |
| 76 | -1 | -1 | -2 | -2 | 0 | 2 | 1 | 0 | -1 | -1 | 0 | 3 | 3 | 1 | 0 | 0 | 1 | 2 | 4 | 2 | 0 | 1 | 3 | 3 | 2 | 0 | -1 |
| 80 | 0 | -1 | -1 | -2 | 0 | 3 | 2 | 0 | -1 | -2 | 0 | 3 | 4 | 2 | 0 | 1 | 0 | 2 | 5 | 2 | 0 | 0 | 2 | 2 | 3 | 2 | -1 | -2 |

## MARCH

| KM LAT= | \| LONGITUDE 60 W |||||| | \| LONGITUDE 30 W |||||| | \| LONGITUDE 0 DEG |||||| | \| LONGITUDE 30 E |||||| |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 2 | 2 | 1 | -1 | 0 | -1 | 0 | 2 | 1 | 0 | -1 |
| 20 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | -2 | 0 | -1 | 0 | 0 | -1 | -2 | -3 |
| 24 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -2 | -2 | -2 | 0 | 0 | -1 | -1 | -2 | -4 | -4 | 0 | 0 | -1 | -3 | -5 | -6 | -5 |
| 28 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -4 | -3 | 0 | 0 | -1 | -3 | -5 | -6 | -5 | 0 | 0 | -1 | -4 | -8 | -9 | -6 |
| 32 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -3 | -5 | -5 | -3 | 0 | 0 | -1 | -4 | -7 | -7 | -5 | 0 | 0 | -1 | -4 | -8 | -9 | -6 |
| 36 | 0 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | -4 | -6 | -6 | -3 | 0 | 1 | 0 | -3 | -7 | -7 | -5 | 0 | 1 | 0 | -3 | -7 | -8 | -5 |
| 40 | 0 | -1 | -2 | -4 | -5 | -4 | -1 | 0 | 0 | -1 | -4 | -6 | -6 | -3 | 0 | 1 | 0 | -3 | -6 | -6 | -4 | 0 | 1 | 2 | -1 | -4 | -6 | -4 |
| 44 | 0 | 0 | -2 | -5 | -6 | -4 | -2 | 0 | 1 | -1 | -4 | -6 | -6 | -3 | 1 | 1 | 1 | -2 | -5 | -5 | -3 | 0 | 2 | 3 | 1 | -2 | -3 | -2 |
| 48 | 0 | 0 | -2 | -5 | -6 | -5 | -2 | 1 | 1 | -1 | -4 | -6 | -5 | -2 | 1 | 2 | 1 | -1 | -4 | -4 | -2 | 0 | 2 | 3 | 2 | -1 | -2 | -1 |
| 52 | 0 | 0 | -2 | -5 | -6 | -5 | -2 | 1 | 1 | -1 | -4 | -5 | -5 | -2 | 1 | 2 | 2 | 0 | -3 | -3 | -1 | 0 | 2 | 3 | 3 | 1 | 0 | -1 |
| 56 | 1 | 0 | -2 | -5 | -5 | -4 | -2 | 1 | 1 | 0 | -3 | -4 | -3 | -1 | 1 | 2 | 2 | 0 | -1 | -1 | 0 | 0 | 2 | 4 | 4 | 2 | 1 | 0 |
| 60 | 0 | 0 | -2 | -4 | -4 | -3 | -1 | 1 | 1 | 0 | -2 | -3 | -2 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 2 | 4 | 4 | 3 | 2 | 1 |
| 64 | 0 | 0 | -1 | -3 | -3 | -2 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 0 | 2 | 4 | 4 | 3 | 3 | 2 |
| 68 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 3 | 2 | 0 | 2 | 4 | 4 | 4 | 4 | 2 |
| 72 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 1 | 3 | 2 | 2 | 3 | 3 | 0 | 2 | 4 | 4 | 4 | 4 | 3 |
| 76 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 0 | 1 | 3 | 3 | 3 | 4 | 3 | 0 | 2 | 4 | 4 | 4 | 4 | 3 |
| 80 | 1 | 0 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 0 | 1 | 3 | 2 | 3 | 4 | 3 | 0 | 1 | 4 | 4 | 4 | 4 | 2 |

## APRIL

| KM LAT= | \| LONGITUDE 60 W |||||| | \| LONGITUDE 30 W |||||| | \| LONGITUDE 0 DEG |||||| | \| LONGITUDE 30 E |||||| |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 |
| 32 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 |
| 36 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 |
| 40 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | -2 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| 44 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 |
| 48 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 |
| 52 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| 56 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| 60 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 |
| 64 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 |
| 68 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| 72 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| 76 | 0 | 1 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| 80 | 0 | 1 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |

N HEMISPHERE                          (PRESSURE)/(ZONAL MEAN PRESSURE) - 1  (Z)

| KM LAT= | LONGITUDE 60 E 20 | 30 | 40 | 50 | 60 | 70 | 80 | LONGITUDE 90 E 20 | 30 | 40 | 50 | 60 | 70 | 80 | LONGITUDE 120 E 20 | 30 | 40 | 50 | 60 | 70 | 80 | LONGITUDE 150 E 20 | 30 | 40 | 50 | 60 | 70 | 80DE8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**JANUARY**

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | -3 | -3 | -3 | -1 | 1 | 0 | -1 | -2 | -3 | -2 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | -1 | -2 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -4 | -4 | -2 | 1 | 0 | -1 | -2 | -2 | -2 | -1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 |
| 24 | 0 | -1 | -2 | -4 | -6 | -6 | -4 | 0 | 0 | -2 | -4 | -6 | -6 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | 7 | 8 | 4 |
| 28 | 0 | 0 | -2 | -5 | -8 | -9 | -5 | 0 | 0 | -1 | -3 | -6 | -6 | -3 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 0 | 1 | 3 | 8 | 12 | 13 | 7 |
| 32 | 0 | 0 | -2 | -5 | -9 | -9 | -5 | 0 | 0 | -1 | -3 | -4 | -4 | -2 | 0 | 0 | 2 | 3 | 5 | 5 | 4 | 0 | 1 | 4 | 10 | 16 | 14 | 9 |
| 36 | 0 | 0 | -1 | -4 | -7 | -7 | -4 | 0 | 0 | 0 | -1 | -2 | -2 | 0 | 0 | 0 | 2 | 5 | 7 | 7 | 5 | 0 | 1 | 4 | 11 | 17 | 18 | 10 |
| 40 | 0 | 0 | 0 | -2 | -5 | -5 | -3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 6 | 9 | 9 | 6 | 0 | 0 | 3 | 10 | 17 | 18 | 11 |
| 44 | 0 | 0 | 1 | 0 | -2 | -3 | -2 | 0 | 0 | 1 | 2 | 2 | 3 | 2 | 0 | 0 | 2 | 6 | 10 | 10 | 7 | 0 | 0 | 2 | 9 | 18 | 17 | 11 |
| 48 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 3 | 4 | 4 | 3 | 0 | 0 | 2 | 6 | 10 | 10 | 7 | 0 | 0 | 2 | 7 | 14 | 15 | 10 |
| 52 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 4 | 3 | 0 | 0 | 2 | 6 | 10 | 10 | 6 | 0 | 0 | 1 | 6 | 12 | 13 | 9 |
| 56 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 5 | 4 | 3 | 0 | 1 | 2 | 6 | 9 | 9 | 5 | 0 | 0 | 1 | 6 | 11 | 11 | 8 |
| 60 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 2 | 0 | 1 | 2 | 5 | 8 | 7 | 5 | 0 | 0 | 1 | 5 | 9 | 9 | 6 |
| 64 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 2 | 0 | 0 | 1 | 4 | 7 | 5 | 4 | 0 | -1 | 1 | 4 | 7 | 7 | 6 |
| 68 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 4 | 6 | 4 | 3 | -1 | -1 | 0 | 3 | 6 | 6 | 5 |
| 72 | 0 | 0 | 1 | 0 | -2 | -2 | -2 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 3 | 5 | 3 | 3 | -1 | -1 | 0 | 3 | 5 | 5 | 4 |
| 76 | 0 | 0 | 1 | -1 | -3 | -3 | -2 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 3 | -1 | -1 | 0 | 3 | 5 | 5 | 4 |
| 80 | 0 | 0 | 1 | -1 | -4 | -4 | -3 | 0 | 0 | 0 | 0 | -1 | -2 | 0 | 0 | -1 | 0 | 2 | 3 | 2 | 3 | -1 | -1 | 0 | 3 | 5 | 5 | 4 |

**FEBRUARY**

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -1 | -1 | -2 | -2 | -2 | 0 | 0 | -2 | -4 | -4 | -3 | -2 | 0 | 0 | -1 | -3 | -4 | -3 | -1 | 1 | 1 | 0 | -1 | 0 | 1 | 1 |
| 20 | 0 | -1 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | -2 | -4 | -5 | -5 | -3 | 0 | 0 | -1 | -3 | -4 | -3 | -1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| 24 | 0 | 0 | -1 | -3 | -6 | -7 | -4 | 1 | 0 | -1 | -4 | -8 | -7 | -4 | 0 | 0 | -1 | -2 | -4 | -3 | -1 | 0 | 1 | 1 | 1 | 3 | 4 | 2 |
| 28 | 0 | -1 | -1 | -4 | -8 | -9 | -6 | 0 | -1 | -1 | -4 | -8 | -8 | -4 | 0 | 0 | 0 | -1 | -3 | -2 | 0 | 0 | 1 | 2 | 3 | 6 | 6 | 4 |
| 32 | 0 | 0 | -1 | -4 | -8 | -8 | -6 | 0 | 0 | 0 | -3 | -6 | -6 | -4 | 0 | 0 | 1 | 1 | 0 | -1 | 1 | 0 | 1 | 2 | 5 | 8 | 7 | 4 |
| 36 | 0 | 0 | 0 | -2 | -6 | -8 | -6 | 0 | 0 | 1 | 0 | -5 | -4 | -3 | 0 | 0 | 1 | 2 | 1 | 2 | 3 | 0 | 0 | 2 | 6 | 10 | 9 | 7 |
| 40 | 0 | 0 | 1 | 0 | -4 | -6 | -5 | 0 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 0 | 1 | 4 | 4 | 4 | 4 | 0 | 0 | 1 | 6 | 10 | 9 | 7 |
| 44 | 0 | 1 | 2 | 2 | -2 | -4 | -4 | 0 | 0 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 2 | 4 | 5 | 6 | 4 | 0 | 0 | 0 | 5 | 9 | 10 | 7 |
| 48 | 0 | 1 | 2 | 3 | 0 | -2 | -4 | 0 | 0 | 2 | 4 | 3 | 2 | 0 | 0 | 0 | 1 | 4 | 7 | 7 | 5 | 0 | 0 | 1 | 4 | 9 | 9 | 7 |
| 52 | 0 | 1 | 3 | 3 | 1 | -1 | -3 | 0 | 1 | 3 | 4 | 3 | 3 | 1 | 0 | 0 | 2 | 4 | 6 | 7 | 5 | 0 | -1 | 0 | 4 | 8 | 8 | 7 |
| 56 | 0 | 1 | 3 | 4 | 2 | 0 | -3 | 0 | 1 | 3 | 4 | 4 | 3 | 1 | 0 | 0 | 2 | 4 | 6 | 6 | 4 | 0 | 0 | 1 | 4 | 7 | 7 | 6 |
| 60 | 0 | 2 | 4 | 4 | 2 | 0 | -2 | 0 | 1 | 4 | 4 | 3 | 3 | 0 | 0 | 0 | 2 | 3 | 4 | 5 | 4 | 0 | -1 | -1 | 2 | 5 | 6 | 5 |
| 64 | 1 | 2 | 4 | 4 | 2 | 0 | -2 | 0 | 1 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 3 | 0 | 0 | 0 | 1 | 3 | 4 | 4 |
| 68 | 0 | 2 | 4 | 3 | 1 | 0 | -2 | 0 | 1 | 3 | 2 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | -1 | -1 | 0 | 2 | 2 | 4 |
| 72 | 0 | 2 | 3 | 3 | 0 | -1 | -2 | 0 | 1 | 2 | 0 | -3 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 2 |
| 76 | 0 | 1 | 2 | 2 | -2 | -2 | -2 | 0 | 0 | 1 | -1 | -4 | -3 | -2 | -1 | -1 | -1 | -2 | -3 | -2 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 2 |
| 80 | 0 | 1 | 3 | 1 | -2 | -3 | -2 | -1 | 0 | 1 | -2 | -6 | -4 | -2 | -1 | -2 | -1 | -3 | -5 | -3 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 1 |

**MARCH**

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 0 | -2 | -3 | -3 | 0 | 0 | -1 | -3 | -5 | -5 | -3 | 1 | 0 | -1 | -3 | -4 | -4 | -2 | 1 | 1 | -1 | -2 | -1 | 0 | 1 |
| 20 | 0 | -1 | -1 | -1 | -4 | -5 | -4 | 0 | 0 | -1 | -3 | -5 | -6 | -3 | 1 | 0 | -1 | -3 | -4 | -3 | -2 | 1 | 1 | 0 | -1 | 0 | 1 | 1 |
| 24 | 0 | 0 | -1 | -4 | -7 | -8 | -5 | 0 | 0 | -1 | -4 | -7 | -7 | -4 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | 1 | 1 | 1 | 3 | 3 | 3 |
| 28 | 0 | 0 | -1 | -5 | -9 | -10 | -6 | 0 | 0 | -1 | -4 | -7 | -7 | -5 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 2 | 3 | 5 | 5 | 3 |
| 32 | 0 | 0 | 0 | -4 | -8 | -9 | -6 | 0 | 0 | 0 | -2 | -5 | -6 | -4 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 2 | 4 | 6 | 6 | 4 |
| 36 | 0 | 1 | 1 | -2 | -6 | -7 | -5 | 0 | 0 | 1 | 0 | -3 | -4 | -3 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 4 | 7 | 7 | 4 |
| 40 | 0 | 1 | 2 | 1 | -3 | -4 | -4 | 0 | 0 | 2 | 2 | 0 | -2 | -2 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | 0 | -1 | 1 | 4 | 6 | 5 | 3 |
| 44 | 0 | 1 | 3 | 3 | 0 | -2 | -2 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | 0 | 0 | 1 | 3 | 4 | 3 | 0 | 0 | -1 | 0 | 3 | 6 | 5 | 2 |
| 48 | 0 | 1 | 4 | 4 | 2 | 0 | -1 | 0 | 1 | 3 | 4 | 3 | 1 | -1 | 0 | 0 | 1 | 4 | 4 | 3 | 0 | 0 | -1 | 0 | 2 | 5 | 5 | 2 |
| 52 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | 0 | 1 | 3 | 5 | 5 | 3 | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 0 | 0 | -1 | -1 | 1 | 3 | 2 | 0 |
| 56 | 0 | 2 | 4 | 5 | 4 | 2 | 0 | 0 | 0 | 3 | 5 | 5 | 3 | 0 | 0 | 0 | 1 | 3 | 4 | 2 | 0 | 0 | -1 | -1 | 1 | 3 | 2 | 0 |
| 60 | 0 | 2 | 4 | 6 | 5 | 3 | 1 | 0 | 1 | 3 | 5 | 5 | 2 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | -2 | 0 | -1 | -1 | 0 | 1 | 1 | -1 |
| 64 | 0 | 2 | 4 | 5 | 3 | 1 | 1 | 0 | 1 | 3 | 4 | 4 | 2 | -1 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | -1 | -2 | -1 | 0 | -1 | -2 |
| 68 | 0 | 2 | 4 | 5 | 4 | 3 | 1 | 0 | 1 | 2 | 3 | 3 | 1 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -3 | 0 | -1 | -2 | -1 | -2 | -2 | -3 |
| 72 | 0 | 1 | 4 | 4 | 4 | 3 | 1 | 0 | 0 | 2 | 3 | 2 | 0 | -1 | -1 | 0 | -1 | 0 | -1 | -2 | -3 | -1 | -1 | -2 | -2 | -2 | -3 | -3 |
| 76 | 0 | 1 | 4 | 4 | 3 | 2 | 1 | -1 | 0 | 1 | 2 | 1 | -1 | -2 | -1 | -1 | -1 | -1 | -2 | -3 | -3 | -1 | -1 | -3 | -2 | -3 | -3 | -3 |
| 80 | 0 | 1 | 3 | 4 | 3 | 2 | 1 | -1 | 0 | 1 | 2 | 0 | -1 | -2 | -1 | -1 | -2 | -1 | -2 | -4 | -4 | -1 | -1 | -3 | -3 | -3 | -4 | -4 |

**APRIL**

| KM LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 1 | 1 | 0 | -2 | -2 | -2 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 |
| 20 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 |
| 24 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 32 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 36 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 40 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 1 |
| 44 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 |
| 48 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 |
| 52 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 |
| 56 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 |
| 60 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 64 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 68 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 72 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 76 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -2 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | 0 |
| 80 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -2 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | 0 |

## APRIL

| KM | \_ | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| LAT= | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | | 0 | 1 | -2 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 20 | | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 24 | | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 2 | 2 | 3 | 2 | 1 | 1 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 28 | | 2 | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 0 | 2 | 3 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| 32 | | 3 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 4 | 3 | 2 | 1 | 1 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 36 | | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 |
| 40 | | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -1 | 0 | 0 | 1 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 0 |
| 44 | | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | -2 | -2 | -1 | 0 | 1 | 1 | -1 | -2 | -2 | 0 | 0 | 0 |
| 48 | | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | 0 | 0 | 0 |
| 52 | | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 0 |
| 56 | | 0 | -1 | -1 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -2 | -3 | -3 | -1 | 0 | 1 | 0 | -2 | -2 | -2 | -1 | 0 | 0 |
| 60 | | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 0 | -2 | -3 | -3 | -1 | 0 | 1 | -1 | -2 | -3 | -3 | -1 | 0 | 1 | -1 | -2 | -2 | -2 | -1 | 0 | 1 |
| 64 | | -1 | -2 | -3 | -3 | -1 | 0 | 1 | -1 | -3 | -3 | -3 | -1 | 0 | 1 | -1 | -3 | -3 | -3 | -1 | 0 | 1 | -1 | -2 | -2 | -1 | 0 | 1 | 1 |
| 68 | | -1 | -2 | -4 | -3 | -2 | 0 | 1 | -1 | -3 | -4 | -3 | -1 | 0 | 1 | -1 | -3 | -3 | -2 | 0 | 1 | 1 | -1 | -2 | -1 | -1 | 0 | 1 | 1 |
| 72 | | -2 | -3 | -4 | -3 | -1 | 0 | 1 | -2 | -3 | -4 | -2 | 0 | 1 | 1 | -1 | -3 | -3 | -2 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 |
| 76 | | -2 | -3 | -4 | -3 | -1 | 0 | 1 | -2 | -3 | -3 | -2 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 |
| 80 | | -2 | -3 | -4 | -3 | -1 | 1 | 1 | -2 | -2 | -3 | -2 | 0 | 1 | 1 | -1 | -2 | -2 | -1 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 1 | 1 | 1 |

## MAY

| KM | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 |
| 20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 |
| 24 | | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 |
| 28 | | 2 | 3 | 3 | 1 | 1 | 1 | 0 | 3 | 3 | 3 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 32 | | 3 | 4 | 4 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 2 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 |
| 36 | | 3 | 4 | 5 | 3 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -2 | -4 | -3 | -2 | 0 | 0 |
| 40 | | 2 | 3 | 4 | 2 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | -3 | -4 | -3 | -2 | 0 | 0 |
| 44 | | 2 | 3 | 3 | 1 | 0 | -1 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -3 | -4 | -3 | -1 | 0 | 1 |
| 48 | | 1 | 2 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | -2 | -2 | -3 | -2 | -1 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 1 |
| 52 | | 1 | 2 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 1 |
| 56 | | 1 | 1 | 1 | -1 | -2 | -2 | -1 | 0 | -1 | -2 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | -2 | -3 | -4 | -3 | -1 | 0 | 1 |
| 60 | | 1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -2 | -2 | -3 | -3 | -2 | -1 | -2 | -3 | -4 | -3 | -2 | -1 | 0 | -2 | -3 | -4 | -2 | 0 | 0 | 1 |
| 64 | | 0 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -2 | -2 | -1 | -2 | -4 | -4 | -3 | -1 | -1 | 0 | -2 | -4 | -3 | -2 | 0 | 1 | 1 |
| 68 | | 0 | -1 | -1 | -2 | -2 | -2 | -1 | -2 | -3 | -3 | -3 | -2 | -1 | -1 | -2 | -4 | -4 | -3 | -1 | 0 | 0 | -3 | -4 | -3 | -1 | 1 | 1 | 1 |
| 72 | | 0 | -1 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -3 | -2 | -1 | 0 | -2 | -4 | -4 | -2 | -1 | 0 | 0 | -3 | -4 | -3 | -1 | 1 | 1 | 1 |
| 76 | | 0 | -1 | -2 | -2 | -2 | -1 | -1 | -2 | -3 | -3 | -3 | -1 | 0 | 0 | -2 | -4 | -4 | -2 | 0 | 1 | 1 | -3 | -3 | -3 | 0 | 1 | 1 | 1 |
| 80 | | 0 | -1 | -1 | -2 | -2 | 0 | -1 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | 0 | 1 | 1 | -2 | -3 | -2 | 0 | 2 | 1 | 1 |

## JUNE

| KM | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | -1 |
| 20 | | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 2 | 2 | 1 | 1 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | -1 |
| 24 | | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 |
| 28 | | 3 | 3 | 4 | 2 | 1 | 1 | 0 | 3 | 4 | 4 | 2 | 1 | 1 | 0 | 3 | 4 | 3 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 32 | | 2 | 4 | 4 | 2 | 1 | 1 | 0 | 3 | 4 | 4 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 |
| 36 | | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 0 |
| 40 | | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | 0 |
| 44 | | 1 | 2 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 |
| 48 | | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | -1 | 0 |
| 52 | | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 |
| 56 | | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | 0 | 0 |
| 60 | | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | -1 | -1 | 0 | 0 | 0 | 0 |
| 64 | | -1 | -1 | -2 | -2 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 68 | | -1 | -2 | -2 | -2 | 0 | 2 | 2 | -1 | -1 | -1 | -1 | 1 | 3 | 2 | 0 | -1 | -1 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | -1 |
| 72 | | -1 | -2 | -2 | -2 | 0 | 3 | 3 | -1 | -2 | -2 | -1 | 2 | 4 | 3 | 1 | -1 | -1 | 0 | 2 | 2 | 1 | 2 | 0 | 0 | 1 | 1 | -1 | -1 |
| 76 | | -2 | -2 | -3 | -2 | 1 | 4 | 4 | -1 | -1 | -1 | 0 | 2 | 4 | 3 | 1 | -1 | 0 | 1 | 2 | 2 | 1 | 2 | 0 | 1 | 1 | 1 | -1 | -2 |
| 80 | | -1 | -2 | -2 | -2 | 1 | 5 | 4 | 0 | -1 | -1 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 0 | -1 | -2 |

## JULY

| KM | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18 | | -2 | -1 | 0 | 1 | -1 | 0 | 0 | -1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | 0 | 1 | 3 | 4 | 2 | 1 | 0 | 0 |
| 20 | | -2 | -1 | 1 | 2 | 0 | 0 | 0 | -1 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 1 | 2 | 3 | 4 | 2 | 1 | 0 | 0 |
| 24 | | 1 | 2 | 3 | 3 | 1 | 1 | 0 | 2 | 4 | 4 | 3 | 1 | 1 | 0 | 3 | 4 | 4 | 3 | 1 | 1 | 0 | 2 | 4 | 4 | 1 | 1 | 0 | 0 |
| 28 | | 2 | 4 | 5 | 5 | 2 | 1 | 0 | 3 | 5 | 4 | 2 | 1 | 1 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | 0 |
| 32 | | 2 | 3 | 4 | 5 | 3 | 1 | 0 | 2 | 3 | 2 | 2 | 1 | 1 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | -1 | 0 |
| 36 | | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -1 | 0 |
| 40 | | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -3 | -4 | -4 | -2 | 0 | 0 | -1 | -2 | -4 | -4 | -1 | 0 | 0 | -1 | -1 | -3 | -2 | -1 | 0 |
| 44 | | 0 | -1 | -3 | -5 | -5 | -2 | -1 | 0 | -2 | -4 | -6 | -6 | -2 | -1 | -1 | -2 | -3 | -4 | -4 | -1 | 0 | -1 | -2 | -1 | -2 | -1 | 0 | 1 |
| 48 | | 0 | -2 | -4 | -6 | -6 | -3 | -1 | -1 | -2 | -5 | -6 | -6 | -3 | -1 | -1 | -2 | -3 | -5 | -3 | -1 | 0 | -1 | -2 | -1 | -2 | -1 | 0 | 1 |
| 52 | | 0 | -2 | -5 | -6 | -6 | -3 | -2 | -1 | -3 | -5 | -7 | -6 | -3 | -1 | -1 | -3 | -4 | -5 | -3 | -1 | 0 | -1 | -2 | -2 | -2 | 0 | 0 | 1 |
| 56 | | 0 | -2 | -6 | -7 | -7 | -4 | -2 | -1 | -3 | -7 | -8 | -6 | -3 | -1 | -1 | -3 | -5 | -5 | -3 | -1 | 0 | -2 | -3 | -2 | -2 | 0 | 1 | 1 |
| 60 | | -1 | -3 | -7 | -8 | -7 | -4 | -2 | -1 | -4 | -8 | -8 | -6 | -3 | -1 | -2 | -4 | -5 | -6 | -3 | -1 | 0 | -2 | -3 | -2 | -2 | 0 | 1 | 1 |
| 64 | | -1 | -4 | -8 | -9 | -7 | -3 | -2 | -2 | -5 | -9 | -9 | -6 | -3 | -1 | -2 | -4 | -5 | -6 | -3 | 0 | 1 | -2 | -3 | -1 | -1 | 1 | 2 | 1 |
| 68 | | -2 | -4 | -8 | -9 | -7 | -3 | -1 | -3 | -5 | -9 | -9 | -6 | -2 | 0 | -3 | -5 | -4 | -5 | -2 | 0 | 1 | -3 | -3 | -1 | 0 | 2 | 2 | 1 |
| 72 | | -2 | -5 | -8 | -9 | -6 | -3 | -1 | -3 | -6 | -9 | -9 | -6 | -1 | 0 | -3 | -5 | -4 | -5 | -2 | 1 | 1 | -3 | -3 | 0 | 1 | 3 | 2 | 1 |
| 76 | | -3 | -5 | -8 | -9 | -6 | -2 | -1 | -4 | -6 | -9 | -9 | -5 | -1 | 0 | -4 | -4 | -5 | -4 | -1 | 1 | 1 | -3 | -2 | 0 | 1 | 3 | 3 | 1 |
| 80 | | -3 | -5 | -8 | -9 | -6 | -2 | -1 | -4 | -6 | -9 | -9 | -5 | -1 | 0 | -4 | -4 | -5 | -4 | -1 | 1 | 1 | -2 | -2 | 1 | 2 | 3 | 2 | 1 |

**LONGITUDE 60 W / LONGITUDE 30 W / LONGITUDE 0 DEG / LONGITUDE 30 E**

KM LAT= -80 -70 -60 -50 -40 -30 -20

### APRIL

| KM | \- | LONGITUDE 60 W | | | | | | \- | LONGITUDE 30 W | | | | | | \- | LONGITUDE 0 DEG | | | | | | \- | LONGITUDE 30 E | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -2 | 0 | 0 | 0 |
| 20 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 24 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -2 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 |
| 28 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -2 | -2 | -1 | -1 | -1 | 0 | -2 | -3 | -2 | -1 | -1 | 0 | 0 |
| 32 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | 0 | -2 | -3 | -2 | -1 | -1 | -1 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 |
| 36 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | -1 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 |
| 40 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -2 | -1 | 1 | 1 | 1 | 0 | 0 |
| 44 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | 0 | 2 | 2 | 1 | 0 | 0 |
| 48 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | -1 | 1 | 2 | 2 | 1 | 0 | 0 |
| 52 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 |
| 56 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | 0 | 2 | 3 | 3 | 1 | 0 | -1 |
| 60 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | 0 | -1 | 1 | 2 | 3 | 3 | 2 | 0 | -1 |
| 64 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 3 | 1 | 0 | 0 | 0 | 3 | 4 | 4 | 2 | 0 | -1 | 1 | 3 | 4 | 3 | 2 | 0 | -1 |
| 68 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 1 | 4 | 5 | 4 | 2 | 0 | -1 | 1 | 3 | 4 | 4 | 2 | 0 | -1 |
| 72 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 4 | 4 | 2 | 1 | 0 | 1 | 4 | 5 | 5 | 2 | 0 | -1 | 1 | 4 | 5 | 4 | 1 | 0 | -1 |
| 76 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 5 | 4 | 2 | 0 | 0 | 1 | 5 | 6 | 5 | 2 | 0 | -1 | 1 | 4 | 5 | 4 | 1 | 0 | -1 |
| 80 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 4 | 5 | 4 | 2 | 0 | 0 | 1 | 5 | 6 | 5 | 2 | 0 | -1 | 1 | 4 | 4 | 3 | 1 | 0 | -1 |

### MAY

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 |
| 20 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 |
| 28 | -1 | -2 | -2 | -1 | -1 | -1 | 0 | -2 | -4 | -3 | -2 | -1 | -1 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -3 | -3 | -2 | -1 | 0 | 0 | 0 |
| 32 | -1 | -3 | -4 | -3 | -1 | -1 | 0 | -3 | -5 | -5 | -3 | -1 | 0 | 0 | -3 | -5 | -4 | -2 | 0 | 0 | 0 | -3 | -3 | -2 | -1 | 0 | 0 | 0 |
| 36 | -2 | -4 | -5 | -4 | -1 | 0 | 0 | -3 | -5 | -6 | -3 | -1 | 0 | 0 | -3 | -4 | -4 | -2 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 1 | 0 | 0 |
| 40 | -2 | -4 | -5 | -3 | -1 | 0 | 1 | -2 | -4 | -5 | -2 | 0 | 1 | 1 | -2 | -3 | -3 | -1 | 1 | 0 | 0 | -2 | -2 | -1 | 0 | 1 | 0 | 0 |
| 44 | -2 | -3 | -4 | -2 | 0 | 1 | 1 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | -2 | -2 | -2 | 0 | 1 | 1 | 1 | -1 | -1 | -1 | 0 | 1 | 0 | 0 |
| 48 | -2 | -3 | -3 | -2 | 0 | 1 | 1 | -2 | -2 | -2 | 0 | 1 | 1 | 1 | -2 | -2 | -1 | 0 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | -2 | -3 | -3 | -1 | 1 | 1 | 1 | -2 | -2 | -2 | 0 | 1 | 1 | 1 | -2 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 56 | -2 | -3 | -3 | -1 | 1 | 2 | 1 | -2 | -2 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 60 | -2 | -3 | -2 | -1 | 1 | 2 | 1 | -2 | -1 | -1 | 1 | 2 | 2 | 1 | -1 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 0 |
| 64 | -2 | -3 | -2 | 0 | 2 | 2 | 1 | -2 | -1 | 0 | 2 | 2 | 2 | 1 | -1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 1 | 0 | 0 |
| 68 | -3 | -2 | -1 | 1 | 2 | 1 | 1 | -2 | -1 | 1 | 2 | 2 | 1 | 1 | -1 | 1 | 2 | 3 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 |
| 72 | -3 | -2 | -1 | 1 | 2 | 1 | 1 | -2 | 0 | 2 | 3 | 2 | 1 | 0 | -1 | 2 | 3 | 3 | 1 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | 0 | 0 |
| 76 | -2 | -2 | 0 | 2 | 2 | 1 | 1 | -2 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 3 | 3 | 3 | 1 | -1 | -1 | 1 | 3 | 3 | 2 | 0 | -1 | -1 |
| 80 | -2 | -2 | 0 | 2 | 2 | 1 | 1 | -2 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 1 | 3 | 3 | 0 | -1 | -1 | 1 | 2 | 2 | 1 | 0 | -1 | -1 |

### JUNE

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 |
| 20 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -2 | -2 | -1 | -1 | 0 | -1 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 |
| 24 | 1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | -2 | -3 | -1 | -1 | -1 | -1 | -2 | -3 | -2 | -1 | -1 | -1 | 0 | -3 | -3 | -3 | -1 | 0 | 0 | 0 |
| 28 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -3 | -3 | -2 | -2 | -1 | 0 | -3 | -4 | -4 | -2 | -1 | -1 | 0 | -3 | -4 | -4 | -2 | -1 | 0 | 0 |
| 32 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -2 | -3 | -3 | -3 | -2 | -1 | 0 | -3 | -4 | -4 | -3 | -1 | -1 | 0 | -3 | -3 | -3 | -2 | -1 | 0 | 0 |
| 36 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 |
| 40 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 1 | 1 | 0 | -2 | -2 | -1 | 0 | 1 | 0 | 0 |
| 44 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -1 | 1 | 2 | 1 | 0 | -2 | -1 | -1 | 1 | 2 | 1 | 0 |
| 48 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | 0 | -2 | -1 | 0 | 1 | 2 | 1 | 1 | -2 | -1 | 0 | 2 | 2 | 1 | 0 |
| 52 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 2 | 2 | 2 | 1 | -1 | 0 | 1 | 2 | 3 | 2 | 1 |
| 56 | 0 | -1 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | 0 | -1 | 0 | 1 | 2 | 2 | 2 | 1 | -1 | 0 | 1 | 2 | 3 | 2 | 1 |
| 60 | 0 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | -1 | 1 | 2 | 3 | 2 | 1 | 1 | -1 | 1 | 2 | 3 | 2 | 1 | 1 |
| 64 | 1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 2 | 0 | -1 | -1 | 0 | 1 | 3 | 3 | 1 | 0 | 0 | -1 | 2 | 3 | 3 | 1 | 1 | 0 |
| 68 | 1 | 0 | 1 | 1 | 0 | -2 | -2 | 1 | 1 | 3 | 2 | 0 | -1 | -2 | 0 | 2 | 3 | 3 | 1 | 0 | -1 | -1 | 2 | 3 | 3 | 1 | 0 | 0 |
| 72 | 2 | 1 | 2 | 2 | 0 | -2 | -3 | 1 | 2 | 3 | 3 | 0 | -2 | -2 | 0 | 2 | 4 | 3 | 1 | -1 | -1 | 0 | 2 | 3 | 3 | 1 | 0 | -1 |
| 76 | 2 | 1 | 2 | 2 | 0 | -3 | -3 | 1 | 2 | 3 | 3 | 0 | -3 | -3 | 0 | 3 | 4 | 4 | 1 | -2 | -2 | 0 | 2 | 3 | 3 | 1 | -1 | -1 |
| 80 | 2 | 1 | 2 | 2 | 0 | -3 | -3 | 1 | 2 | 4 | 3 | 0 | -3 | -3 | 0 | 2 | 4 | 4 | 1 | -2 | -2 | -1 | 2 | 3 | 3 | 1 | -1 | -1 |

### JULY

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 2 | 3 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | -1 | -3 | -1 | 0 | 1 | 0 |
| 20 | 1 | 3 | 3 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | 0 | -2 | -3 | -2 | 0 | 1 | 0 |
| 24 | 1 | 2 | 3 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -2 | -1 | -1 | -1 | -2 | -4 | -4 | -3 | -1 | 0 | -1 | -2 | -5 | -6 | -3 | -1 | 0 | 0 |
| 28 | 0 | 0 | 1 | -2 | -1 | -1 | 0 | -1 | -3 | -4 | -2 | -1 | -1 | -1 | -2 | -5 | -7 | -5 | -2 | -1 | -1 | -2 | -5 | -8 | -4 | -2 | -1 | 0 |
| 32 | 0 | -1 | -1 | -3 | -2 | -1 | 0 | -1 | -3 | -4 | -5 | -2 | -1 | 0 | -1 | -4 | -6 | -6 | -3 | -1 | 0 | -1 | -4 | -6 | -4 | -2 | -1 | 0 |
| 36 | 0 | -1 | -1 | -3 | -2 | -1 | 0 | -1 | -2 | -3 | -4 | -2 | 0 | 0 | -1 | -3 | -5 | -5 | -2 | 0 | 0 | -1 | -2 | -4 | -3 | -1 | 0 | 0 |
| 40 | -1 | -2 | -1 | -2 | -1 | 0 | 1 | -1 | -2 | -2 | -3 | -1 | 0 | 0 | 0 | -1 | -3 | -2 | -1 | 0 | 0 | 1 | 0 | -1 | 0 | 1 | 1 | 0 |
| 44 | -1 | -2 | -1 | -1 | -1 | 1 | 1 | 0 | -1 | -2 | -1 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 |
| 48 | -1 | -2 | 0 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 1 | 2 | 2 | 4 | 3 | 2 | 1 |
| 52 | -1 | -2 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 3 | 2 | 1 | 1 | 3 | 3 | 5 | 4 | 2 | 1 |
| 56 | -2 | -1 | 0 | 0 | 2 | 2 | 1 | -1 | 0 | 1 | 1 | 3 | 2 | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 3 | 4 | 6 | 5 | 3 | 1 |
| 60 | -2 | -2 | 0 | 1 | 3 | 2 | 1 | -1 | 0 | 2 | 3 | 4 | 2 | 1 | 1 | 2 | 3 | 4 | 4 | 3 | 1 | 2 | 4 | 5 | 6 | 5 | 3 | 1 |
| 64 | -2 | -1 | 2 | 2 | 4 | 3 | 1 | 0 | 1 | 3 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | 4 | 4 | 2 | 1 | 3 | 4 | 4 | 6 | 4 | 2 | 1 |
| 68 | -1 | -1 | 2 | 3 | 4 | 3 | 1 | 0 | 1 | 3 | 4 | 4 | 2 | 0 | 2 | 3 | 3 | 4 | 3 | 1 | 0 | 3 | 4 | 4 | 4 | 2 | 1 | 0 |
| 72 | -1 | 0 | 3 | 4 | 5 | 3 | 1 | 1 | 1 | 4 | 4 | 4 | 2 | 0 | 2 | 3 | 3 | 3 | 2 | 1 | -1 | 3 | 4 | 3 | 3 | 1 | 0 | -1 |
| 76 | -1 | 0 | 4 | 5 | 5 | 3 | 1 | 1 | 2 | 4 | 4 | 4 | 1 | -1 | 2 | 3 | 3 | 2 | 1 | 0 | -1 | 4 | 4 | 3 | 2 | 0 | -1 | -1 |
| 80 | -1 | 0 | 4 | 5 | 5 | 2 | 1 | 1 | 1 | 3 | 4 | 4 | 1 | 0 | 3 | 2 | 2 | 1 | 1 | 0 | -1 | 3 | 4 | 2 | 2 | 0 | -1 | -1 |

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|  | LONGITUDE 60 E | | | | | | | LONGITUDE 90 E | | | | | | | LONGITUDE 120 E | | | | | | | LONGITUDE 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20DEG |

**APRIL**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 20 | -1 | -2 | -3 | -2 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 24 | -2 | -3 | -3 | -2 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 28 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 32 | -2 | -2 | -1 | -1 | 0 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 36 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 |
| 40 | -1 | -1 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 44 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0 |
| 48 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 |
| 52 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 |
| 56 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 |
| 60 | 1 | 2 | 3 | 2 | 1 | 0 | -1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 |
| 64 | 1 | 2 | 3 | 2 | 1 | 0 | -1 | 1 | 1 | 1 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | 0 | 0 |
| 68 | 1 | 2 | 3 | 2 | 1 | -1 | -1 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 |
| 72 | 2 | 2 | 2 | 1 | 0 | -1 | -1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | -1 | -2 | -4 | -3 | -2 | 0 | 0 |
| 76 | 1 | 2 | 2 | 1 | 0 | -1 | -2 | 1 | -1 | -1 | -2 | -2 | -1 | -1 | 0 | -2 | -3 | -4 | -3 | -1 | 0 | -1 | -3 | -4 | -4 | -2 | 0 | 0 |
| 80 | 1 | 1 | 1 | 1 | 0 | -1 | -2 | 0 | -1 | -2 | -2 | -2 | -2 | -1 | -1 | -3 | -4 | -4 | -3 | -1 | 0 | -2 | -3 | -4 | -4 | -2 | 0 | 1 |

**MAY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 24 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 |
| 32 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 4 | 2 | 1 | 0 | 0 | 2 | 4 | 4 | 2 | 1 | 0 | 0 |
| 36 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | 0 | 3 | 5 | 5 | 3 | 1 | 0 | 0 |
| 40 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | -1 |
| 44 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | -1 | 2 | 4 | 4 | 3 | 1 | 0 | -1 |
| 48 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | -1 | 2 | 3 | 3 | 2 | 0 | -1 | -1 |
| 52 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | -1 | 2 | 3 | 3 | 2 | 0 | -1 | -1 |
| 56 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 2 | 1 | 0 | -1 | 2 | 2 | 2 | 1 | 0 | -1 | -1 |
| 60 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | -1 | -1 | -1 |
| 64 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | -1 |
| 68 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | -1 | -1 | -1 | -1 |
| 72 | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | -1 | -1 | 0 | 0 | 2 | 1 | 0 | -1 | -1 | -1 | -1 |
| 76 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | -1 | 0 | 0 | 0 | 3 | 2 | 1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | -1 |
| 80 | 2 | 3 | 1 | 0 | -1 | -1 | 0 | 3 | 3 | 0 | -1 | 0 | 0 | 0 | 2 | 2 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 |

**JUNE**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -2 | -3 | -1 | 0 | 1 | 1 | 0 | -1 | -3 | -2 | -1 | 0 | 1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | -1 | -2 | -3 | -1 | 0 | 1 | 1 | 0 | -2 | -3 | -1 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 24 | -2 | -3 | -3 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 0 |
| 28 | -3 | -3 | -3 | -1 | 0 | 0 | 0 | -2 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 0 |
| 32 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 1 | 0 |
| 36 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 40 | -2 | -1 | -1 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 44 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | 0 |
| 48 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 1 | 1 | 0 | -1 | -1 | -1 | 0 |
| 52 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 1 | 0 | -1 | -2 | -2 | -1 | -1 |
| 56 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 |
| 60 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -3 | -2 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | 0 |
| 64 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -3 | -3 | -3 | -2 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | 1 |
| 68 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | -1 | -2 | -3 | -3 | -3 | -1 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 1 |
| 72 | 0 | 1 | 1 | 1 | 0 | -1 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | -1 | -2 | -3 | -4 | -3 | -1 | 1 | -1 | -2 | -3 | -4 | -2 | 1 | 2 |
| 76 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | -1 | -2 | -4 | -4 | -3 | -1 | 1 | -1 | -3 | -4 | -4 | -1 | 2 | 3 |
| 80 | -1 | 1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -3 | -3 | -3 | -2 | 0 | -1 | -2 | -4 | -4 | -3 | 0 | 1 | -1 | -3 | -4 | -4 | -1 | 2 | 3 |

**JULY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | -1 | -3 | -2 | 0 | 1 | 1 | 1 | -1 | -3 | -2 | -1 | 0 | 1 | 0 | -1 | -2 | -2 | -1 | -1 | 0 | -2 | -1 | -1 | 0 | -1 | -1 | 0 |
| 20 | 1 | -2 | -4 | -2 | 0 | 0 | 1 | 0 | -1 | -3 | -2 | -1 | 0 | 1 | -1 | -1 | -2 | -1 | -1 | -1 | 0 | -2 | -1 | 0 | 0 | -1 | -1 | 0 |
| 24 | -2 | -5 | -6 | -3 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 |
| 28 | -2 | -4 | -5 | -3 | -1 | 0 | 0 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 5 | 4 | 2 | 1 | 0 |
| 32 | -1 | -3 | -3 | -1 | -1 | -1 | 0 | -1 | -1 | 1 | 2 | 1 | 0 | 0 | -1 | 1 | 5 | 5 | 3 | 1 | 0 | 0 | 3 | 6 | 6 | 3 | 2 | 0 |
| 36 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 4 | 5 | 3 | 1 | 0 | 0 | 2 | 6 | 7 | 4 | 1 | 0 | 0 | 2 | 4 | 5 | 3 | 1 | 0 |
| 40 | 1 | 1 | 2 | 4 | 3 | 1 | 0 | 0 | 2 | 5 | 7 | 4 | 1 | 0 | 0 | 2 | 5 | 6 | 4 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| 44 | 1 | 3 | 4 | 5 | 4 | 2 | 0 | 1 | 3 | 6 | 7 | 5 | 1 | 0 | 0 | 2 | 4 | 5 | 3 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -2 | -1 |
| 48 | 2 | 3 | 5 | 6 | 4 | 2 | 1 | 1 | 3 | 6 | 7 | 4 | 1 | 0 | 0 | 2 | 3 | 2 | 1 | -1 | -1 | 0 | 0 | -2 | -3 | -4 | -3 | -1 |
| 52 | 2 | 4 | 6 | 7 | 5 | 2 | 1 | 1 | 3 | 6 | 6 | 4 | 1 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | -1 | 0 | 0 | -2 | -4 | -5 | -3 | -2 |
| 56 | 2 | 4 | 6 | 7 | 5 | 2 | 1 | 2 | 4 | 6 | 6 | 4 | 1 | 0 | 1 | 2 | 2 | 1 | -1 | -2 | -1 | 0 | 0 | -2 | -4 | -5 | -4 | -2 |
| 60 | 2 | 4 | 6 | 7 | 5 | 2 | 1 | 2 | 4 | 6 | 6 | 4 | 3 | 0 | 1 | 2 | 2 | 1 | -1 | -2 | -1 | 0 | -1 | -3 | -5 | -5 | -3 | -2 |
| 64 | 3 | 5 | 6 | 7 | 4 | 1 | 0 | 2 | 4 | 6 | 6 | 4 | 2 | 0 | 1 | 2 | 3 | 1 | -1 | -2 | -1 | 0 | -1 | -3 | -4 | -5 | -3 | -2 |
| 68 | 3 | 5 | 6 | 6 | 3 | 0 | 0 | 3 | 4 | 6 | 5 | 2 | 0 | 0 | 1 | 2 | 2 | 1 | -1 | -2 | -1 | -1 | -2 | -3 | -4 | -5 | -3 | -1 |
| 72 | 4 | 5 | 5 | 3 | 1 | -1 | 0 | 3 | 4 | 6 | 5 | 1 | -1 | 0 | 1 | 2 | 2 | 2 | 0 | -1 | 0 | -1 | -2 | -4 | -4 | -4 | -2 | -1 |
| 76 | 4 | 5 | 5 | 4 | 1 | -1 | 0 | 3 | 4 | 5 | 4 | 2 | 0 | 0 | 1 | 2 | 3 | 3 | 0 | -1 | 0 | -1 | -2 | -4 | -4 | -3 | -2 | 0 |
| 80 | 4 | 5 | 5 | 4 | 1 | -1 | 0 | 3 | 4 | 6 | 6 | 2 | 0 | 0 | 1 | 2 | 3 | 3 | 0 | -1 | 0 | -1 | -2 | -3 | -4 | -3 | -2 | 0 |

|  | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
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| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |

**AUGUST**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -4 | -4 | -3 | -2 | -1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 4 | 7 | 6 | 3 | 2 | 0 | 2 | 5 | 7 | 6 | 3 | 1 | 0 |
| 20 | -2 | -4 | -4 | -3 | -1 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 5 | 7 | 6 | 3 | 2 | 0 | 3 | 7 | 8 | 6 | 3 | 1 | 0 |
| 24 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 4 | 3 | 2 | 1 | 0 | 5 | 7 | 7 | 5 | 3 | 1 | 0 | 3 | 6 | 5 | 3 | 2 | 1 | 0 |
| 28 | 4 | 6 | 5 | 2 | 1 | 1 | 0 | 4 | 6 | 5 | 3 | 2 | 1 | 0 | 3 | 5 | 4 | 2 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| 32 | 4 | 6 | 6 | 4 | 2 | 1 | 0 | 4 | 5 | 4 | 2 | 1 | 1 | 0 | 2 | 2 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -2 | -1 | 0 |
| 36 | 4 | 5 | 5 | 4 | 2 | 1 | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | -2 | -4 | -3 | -1 | 0 | -1 | -2 | -4 | -4 | -3 | -1 | 0 |
| 40 | 4 | 4 | 3 | 2 | 1 | 0 | 0 | 2 | 2 | -1 | -2 | -2 | -1 | 0 | 1 | -1 | -3 | -5 | -4 | -2 | 0 | -1 | -2 | -4 | -4 | -3 | -1 | 0 |
| 44 | 3 | 3 | 0 | -1 | -1 | -1 | 0 | 2 | 0 | -3 | -4 | -4 | -2 | 0 | 0 | -2 | -4 | -5 | -4 | -2 | 0 | -2 | -3 | -3 | -3 | -2. | 0 | 0 |
| 48 | 3 | 2 | -2 | -3 | -2 | -2 | -1 | 1 | -1 | -4 | -5 | -4 | -2 | 0 | -1 | -3 | -4 | -5 | -4 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 |
| 52 | 2 | 1 | -3 | -4 | -3 | -2 | -1 | 0 | -2 | -5 | -6 | -4 | -2 | -1 | -1 | -3 | -5 | -5 | -3 | -1 | 0 | -2 | -4 | -3 | -2 | 0 | 1 | 1 |
| 56 | 1 | 0 | -4 | -4 | -3 | -2 | -1 | -1 | -2 | -5 | -5 | -4 | -2 | 0 | -2 | -4 | -5 | -4 | -2 | 0 | 1 | -2 | -4 | -3 | -1 | 0 | 2 | 1 |
| 60 | 1 | -1 | -5 | -5 | -3 | -2 | -1 | -1 | -3 | -6 | -5 | -3 | -2 | 0 | -2 | -4 | -4 | -3 | -2 | 0 | 1 | -2 | -3 | -1 | 1 | 1 | 2 | 2 |
| 64 | 0 | -1 | -5 | -5 | -2 | -2 | -1 | 0 | -3 | -5 | -5 | -3 | -1 | 0 | -1 | -3 | -3 | -1 | -1 | 1 | 1 | -1 | -2 | 1 | 3 | 2 | 2 | 1 |
| 68 | 1 | -2 | -6 | -5 | -2 | -1 | 0 | 0 | -2 | -5 | -4 | -3 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 5 | 4 | 2 | 1 |
| 72 | 1 | -2 | -5 | -5 | -2 | -1 | 0 | 1 | -1 | -4 | -4 | -2 | -1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 5 | 6 | 5 | 2 | 1 |
| 76 | 2 | -1 | -5 | -5 | -3 | -1 | 1 | 2 | 0 | -3 | -3 | -2 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 4 | 7 | 7 | 5 | 3 | 1 |
| 80 | 2 | -1 | -5 | -5 | -3 | -1 | 1 | 3 | 1 | -2 | -3 | -2 | 0 | 1 | 4 | 4 | 3 | 3 | 2 | 2 | 1 | 3 | 6 | 8 | 8 | 6 | 3 | 1 |

**SEPTEMBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -2 | 3 | 7 | 6 | 3 | 2 | 1 | 0 | 4 | 8 | 6 | 4 | 2 | 1 | 2 | 5 | 7 | 6 | 3 | 1 | 0 | 3 | 6 | 6 | 5 | 2 | 1 | 0 |
| 20 | -1 | 4 | 7 | 6 | 3 | 2 | 1 | 1 | 6 | 8 | 6 | 4 | 2 | 1 | 4 | 6 | 7 | 5 | 3 | 1 | 0 | 5 | 7 | 6 | 4 | 2 | 0 | 0 |
| 24 | 3 | 7 | 8 | 6 | 3 | 2 | 1 | 3 | 7 | 8 | 5 | 3 | 1 | 1 | 3 | 5 | 5 | 4 | 2 | 1 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 |
| 28 | 3 | 7 | 8 | 5 | 3 | 1 | 1 | 2 | 5 | 5 | 4 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | -1 | 0 |
| 32 | 2 | 5 | 6 | 4 | 2 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | -2 | -2 | -2 | -2 | -1 | 0 | 0 | -3 | -5 | -5 | -4 | -2 | -1 | 0 |
| 36 | 1 | 3 | 4 | 2 | 1 | 1 | 0 | -1 | 0 | 0 | -1 | 0 | 0 | 1 | -3 | -4 | -5 | -4 | -2 | 0 | 0 | -4 | -6 | -7 | -5 | -3 | -1 | 0 |
| 40 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | -3 | -2 | -2 | -2 | -1 | 0 | 1 | -4 | -5 | -6 | -5 | -2 | 0 | 1 | -5 | -7 | -7 | -6 | -3 | 0 | 0 |
| 44 | -1 | 0 | 1 | 0 | 0 | 0 | 1 | -4 | -4 | -3 | -3 | -1 | 0 | 1 | -6 | -7 | -6 | -4 | -2 | 0 | 1 | -6 | -8 | -7 | -5 | -2 | 0 | 0 |
| 48 | -2 | -1 | 0 | 0 | -1 | 0 | 1 | -5 | -5 | -3 | -3 | -1 | 1 | 1 | -6 | -7 | -6 | -4 | -1 | 1 | 1 | -6 | -8 | -6 | -4 | -1 | 1 | 1 |
| 52 | -2 | -1 | 0 | 0 | -1 | 0 | 1 | -5 | -5 | -3 | -2 | -1 | 1 | 1 | -7 | -7 | -6 | -3 | -1 | 1 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 |
| 56 | -2 | -1 | 0 | -2 | -2 | 0 | 1 | -5 | -5 | -3 | -2 | -1 | 1 | 1 | -7 | -7 | -5 | -3 | -1 | 1 | 1 | -6 | -7 | -5 | -3 | 0 | 1 | 1 |
| 60 | -3 | -3 | -2 | -2 | -2 | 0 | 1 | -4 | -6 | -4 | -3 | -1 | 1 | 1 | -7 | -7 | -5 | -3 | -1 | 1 | 1 | -6 | -6 | -3 | -2 | 0 | 2 | 1 |
| 64 | -4 | -5 | -3 | -3 | -2 | -1 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 | -6 | -7 | -4 | -2 | 0 | 1 | 1 | -5 | -5 | -2 | 0 | 1 | 2 | 1 |
| 68 | -5 | -6 | -5 | -4 | -2 | 0 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 1 | -6 | -6 | -4 | -2 | 0 | 2 | 2 | -4 | -3 | 0 | 1 | 1 | 2 | 1 |
| 72 | -5 | -7 | -5 | -4 | -2 | 0 | 1 | -6 | -7 | -5 | -3 | -1 | 1 | 2 | -5 | -5 | -3 | -1 | 0 | 2 | 2 | -2 | -2 | 1 | 2 | 2 | 2 | 1 |
| 76 | -5 | -7 | -5 | -4 | -2 | 0 | 1 | -5 | -7 | -5 | -3 | -1 | 1 | 2 | -4 | -5 | -2 | -1 | 1 | 2 | 2 | -1 | -1 | 2 | 2 | 2 | 2 | 1 |
| 80 | -5 | -6 | -5 | -4 | -2 | 0 | 1 | -5 | -6 | -4 | -3 | -1 | 2 | 2 | -3 | -4 | -2 | 0 | 1 | 2 | 2 | 0 | 0 | 2 | 3 | 3 | 2 | 1 |

**OCTOBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 2 | 3 | 2 | 1 | 1 | 0 | 3 | 6 | 7 | 5 | 3 | 1 | 0 | 4 | 7 | 7 | 5 | 3 | 1 | 0 | 4 | 6 | 4 | 3 | 1 | 0 | 0 |
| 20 | 1 | 3 | 4 | 3 | 1 | 1 | 0 | 4 | 7 | 7 | 5 | 3 | 1 | 0 | 5 | 8 | 7 | 5 | 2 | 1 | 0 | 4 | 5 | 4 | 3 | 1 | 0 | 0 |
| 24 | 4 | 6 | 6 | 3 | 2 | 1 | 0 | 5 | 8 | 7 | 5 | 3 | 1 | 0 | 5 | 7 | 6 | 4 | 2 | 1 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 |
| 28 | 5 | 8 | 8 | 4 | 2 | 1 | 0 | 5 | 8 | 7 | 4 | 2 | 1 | 0 | 3 | 5 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 |
| 32 | 5 | 9 | 9 | 5 | 3 | 1 | 0 | 4 | 7 | 7 | 4 | 2 | 1 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 36 | 5 | 8 | 9 | 5 | 2 | 1 | 0 | 4 | 6 | 6 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | -1 | -2 | -4 | -3 | -2 | 0 | 0 |
| 40 | 4 | 7 | 8 | 4 | 2 | 0 | 0 | 3 | 5 | 5 | 3 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | -1 | -3 | -4 | -3 | -2 | 0 | 0 |
| 44 | 4 | 6 | 6 | 3 | 1 | 0 | 0 | 3 | 5 | 5 | 2 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 1 | -1 | -3 | -4 | -3 | -2 | 0 | 0 |
| 48 | 3 | 6 | 5 | 2 | 1 | 0 | 0 | 2 | 5 | 5 | 2 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | -1 | 0 | 1 | -1 | -3 | -3 | -3 | -2 | 0 | 0 |
| 52 | 3 | 5 | 4 | 1 | 0 | 0 | 0 | 2 | 5 | 4 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | -1 | 0 | 1 | -1 | -2 | -3 | -2 | -1 | 0 | 1 |
| 56 | 2 | 4 | 3 | 0 | -1 | 0 | 0 | 2 | 4 | 3 | 0 | -1 | 0 | 1 | 0 | 2 | 1 | -1 | -1 | 0 | 1 | -1 | -2 | -3 | -2 | -1 | 0 | 1 |
| 60 | 2 | 2 | 1 | -1 | -1 | 0 | 0 | 1 | 3 | 2 | 0 | -1 | 0 | 1 | 0 | 1 | 1 | -1 | -1 | 0 | 1 | -1 | -1 | -2 | -2 | -1 | 0 | 1 |
| 64 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 1 | 1 |
| 68 | 1 | 1 | 0 | -1 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 |
| 72 | 0 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 76 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 80 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |

**NOVEMBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | -1 | 2 | 4 | 4 | 3 | 1 | 0 | -1 |
| 20 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 3 | 4 | 3 | 1 | 0 | -1 | 2 | 4 | 4 | 3 | 1 | 0 | -1 |
| 24 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 28 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 |
| 32 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 |
| 36 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | 0 | 0 | 0 |
| 40 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| 48 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 56 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 |
| 60 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 |
| 64 | -2 | -2 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 |
| 68 | -2 | -3 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 |
| 72 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 0 | 0 |
| 76 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 2 | 3 | 2 | 2 | 1 | 0 | 0 |
| 80 | -2 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 2 | 2 | 0 | 0 | 0 |

| KM LAT= | LONGITUDE 60 W -80 -70 -60 -50 -40 -30 -20 | | | | | | | LONGITUDE 30 W -80 -70 -60 -50 -40 -30 -20 | | | | | | | LONGITUDE 0 DEG -80 -70 -60 -50 -40 -30 -20 | | | | | | | LONGITUDE 30 E -80 -70 -60 -50 -40 -30 -20DEG | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**AUGUST**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 3 | 4 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 20 | 2 | 4 | 3 | 2 | 1 | 0 | -1 | 0 | 0 | -1 | -2 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 |
| 24 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | -1 | -1 | -4 | -5 | -4 | -2 | -1 | -1 | -1 | -4 | -5 | -3 | -1 | 0 | 0 | 0 |
| 28 | -1 | -2 | -2 | -2 | -1 | -1 | 0 | -3 | -4 | -4 | -2 | -1 | -1 | 0 | -4 | -5 | -4 | -2 | -1 | 0 | 0 | -4 | -5 | -4 | -1 | 0 | 0 | 0 |
| 32 | -2 | -3 | -4 | -3 | -1 | -1 | 0 | -3 | -4 | -4 | -1 | 0 | 0 | 0 | -3 | -5 | -3 | -1 | 0 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 |
| 36 | -2 | -3 | -4 | -3 | -1 | 0 | 0 | -3 | -4 | -3 | 0 | 1 | 1 | 0 | -3 | -4 | -2 | 1 | 1 | 1 | 0 | -3 | -3 | -2 | 0 | 0 | 0 | 0 |
| 40 | -2 | -3 | -3 | -2 | 0 | 1 | 0 | -3 | -3 | -2 | 1 | 2 | 2 | 1 | -3 | -3 | -1 | 2 | 2 | 1 | 1 | -3 | -2 | -1 | 0 | 0 | 0 | 0 |
| 44 | -3 | -3 | -2 | 0 | 1 | 1 | 1 | -3 | -3 | -1 | 2 | 3 | 2 | 1 | -3 | -3 | 0 | 2 | 2 | 1 | 0 | -2 | -1 | 0 | 1 | 0 | 0 | 0 |
| 48 | -3 | -3 | -2 | 1 | 2 | 2 | 1 | -3 | -3 | 0 | 3 | 3 | 2 | 1 | -2 | -2 | 1 | 2 | 2 | 1 | 0 | -1 | 0 | 2 | 2 | 0 | 0 | 0 |
| 52 | -3 | -3 | -1 | 1 | 2 | 2 | 1 | -2 | -2 | 0 | 3 | 3 | 2 | 0 | -2 | -1 | 1 | 3 | 2 | 1 | 0 | -1 | 1 | 3 | 3 | 1 | 0 | 0 |
| 56 | -2 | -3 | -1 | 2 | 2 | 2 | 1 | -2 | -1 | 1 | 3 | 3 | 2 | 1 | -1 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 0 |
| 60 | -2 | -1 | 1 | 3 | 3 | 3 | 1 | -1 | 0 | 2 | 3 | 3 | 1 | 1 | -1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | -1 |
| 64 | -1 | 0 | 3 | 5 | 4 | 3 | 1 | -1 | 1 | 3 | 4 | 2 | 1 | 0 | -1 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | -1 | -2 | -2 | -1 |
| 68 | 0 | 2 | 5 | 6 | 5 | 2 | 1 | 0 | 2 | 4 | 4 | 2 | 0 | 0 | -1 | 1 | 1 | -1 | -2 | -2 | -1 | -1 | 0 | 0 | -3 | -4 | -3 | -1 |
| 72 | 1 | 3 | 7 | 7 | 5 | 2 | 0 | 0 | 2 | 4 | 4 | 1 | -1 | -1 | -2 | 0 | 0 | -2 | -3 | -3 | -2 | -2 | -2 | -2 | -4 | -5 | -3 | -2 |
| 76 | 2 | 4 | 8 | 8 | 5 | 2 | 0 | 0 | 2 | 4 | 3 | 1 | -1 | -2 | -2 | -1 | -1 | -2 | -4 | -4 | -2 | -3 | -3 | -3 | -5 | -6 | -3 | -2 |
| 80 | 2 | 5 | 8 | 8 | 5 | 1 | 0 | 0 | 1 | 3 | 3 | 0 | -2 | -2 | -3 | -3 | -2 | -3 | -5 | -4 | -3 | -5 | -5 | -4 | -5 | -6 | -4 | -2 |

**SEPTEMBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 4 | 6 | 5 | 3 | 1 | 0 | 0 | 3 | 3 | 1 | 0 | -1 | -1 | -1 | 1 | -1 | -4 | -4 | -2 | -1 | -1 | -1 | -6 | -9 | -7 | -3 | -1 | -1 |
| 20 | 5 | 6 | 4 | 2 | 0 | 0 | 0 | 3 | 2 | 1 | -1 | -1 | -1 | -1 | 0 | -3 | -5 | -4 | -2 | -1 | -1 | -3 | -7 | -9 | -7 | -3 | -1 | -1 |
| 24 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -2 | -3 | -2 | -2 | -2 | -1 | -1 | -3 | -5 | -5 | -4 | -2 | -1 | 0 | -4 | -7 | -8 | -6 | -3 | -1 | 0 |
| 28 | -2 | -4 | -4 | -2 | -2 | -1 | -1 | -3 | -5 | -5 | -3 | -2 | -1 | 0 | -2 | -5 | -5 | -4 | -2 | -1 | 0 | -2 | -4 | -5 | -4 | -2 | -1 | 0 |
| 32 | -3 | -6 | -7 | -5 | -3 | -1 | 0 | -3 | -5 | -6 | -4 | -2 | -1 | 0 | -1 | -3 | -4 | -3 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 |
| 36 | -4 | -6 | -7 | -5 | -3 | -1 | 0 | -2 | -5 | -5 | -4 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 40 | -4 | -6 | -7 | -5 | -2 | 0 | 0 | -2 | -4 | -4 | -3 | -1 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 2 | 1 | 0 | 0 |
| 44 | -4 | -6 | -5 | -3 | -1 | 0 | 0 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 4 | 4 | 3 | 2 | 1 | 0 | 0 |
| 48 | -4 | -6 | -4 | -2 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 5 | 5 | 3 | 2 | 1 | 0 | -1 |
| 52 | -4 | -5 | -3 | -1 | 0 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | 2 | 3 | 2 | 2 | 2 | 0 | -1 | 5 | 5 | 3 | 2 | 1 | 0 | -1 |
| 56 | -4 | -4 | -2 | -1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 3 | 3 | 2 | 2 | 2 | 0 | 0 | 5 | 5 | 3 | 2 | 1 | 0 | -1 |
| 60 | -3 | -2 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 1 | 0 | 4 | 5 | 4 | 3 | 2 | 1 | 0 | 6 | 6 | 3 | 2 | 2 | 0 | -1 |
| 64 | -2 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 4 | 5 | 4 | 3 | 1 | 0 | 5 | 6 | 5 | 4 | 3 | 1 | 0 | 6 | 6 | 3 | 2 | 2 | 0 | -1 |
| 68 | 0 | 1 | 4 | 4 | 2 | 2 | 1 | 3 | 6 | 6 | 5 | 3 | 1 | 0 | 5 | 8 | 6 | 4 | 3 | 1 | -1 | 6 | 7 | 3 | 2 | 1 | 0 | -1 |
| 72 | 1 | 3 | 5 | 5 | 3 | 1 | 0 | 4 | 7 | 7 | 5 | 3 | 1 | -1 | 6 | 8 | 6 | 4 | 2 | 0 | -1 | 6 | 6 | 3 | 2 | 1 | -1 | -1 |
| 76 | 2 | 4 | 6 | 5 | 3 | 1 | 0 | 4 | 7 | 8 | 6 | 3 | 1 | -1 | 5 | 8 | 6 | 4 | 2 | 0 | -1 | 5 | 5 | 3 | 1 | 1 | -1 | -1 |
| 80 | 2 | 5 | 6 | 6 | 4 | 1 | 0 | 4 | 7 | 8 | 6 | 3 | 1 | -1 | 5 | 8 | 6 | 4 | 2 | 0 | -1 | 4 | 5 | 2 | 1 | 0 | -1 | -1 |

**OCTOBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 0 | -1 | -2 | -1 | -1 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | -1 | 0 | -2 | -4 | -4 | -2 | -1 | 0 | 0 |
| 20 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | -1 | -2 | -2 | -2 | -1 | -1 | 0 | -2 | -4 | -4 | -2 | -1 | -1 | 0 | -3 | -5 | -4 | -3 | -1 | 0 | 0 |
| 24 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -3 | -5 | -4 | -3 | -2 | -1 | 0 | -4 | -6 | -5 | -3 | -2 | -1 | 0 | -5 | -7 | -6 | -3 | -1 | 0 | 0 |
| 28 | -2 | -4 | -4 | -2 | -1 | -1 | 0 | -4 | -7 | -7 | -4 | -2 | -1 | 0 | -5 | -8 | -7 | -4 | -2 | -1 | 0 | -5 | -7 | -6 | -3 | -2 | -1 | 0 |
| 32 | -3 | -6 | -7 | -4 | -2 | -1 | 0 | -4 | -8 | -8 | -6 | -3 | -1 | 0 | -5 | -8 | -8 | -5 | -3 | -1 | 0 | -4 | -6 | -6 | -3 | -2 | -1 | 0 |
| 36 | -3 | -6 | -8 | -5 | -2 | -1 | 0 | -4 | -8 | -9 | -6 | -3 | -1 | 0 | -4 | -7 | -7 | -5 | -2 | -1 | 0 | -3 | -5 | -4 | -3 | -1 | -1 | 0 |
| 40 | -3 | -6 | -8 | -6 | -2 | -1 | 0 | -4 | -7 | -9 | -6 | -2 | -1 | 0 | -4 | -6 | -6 | -4 | -2 | -1 | 0 | -3 | -4 | -3 | -1 | -1 | 0 | 0 |
| 44 | -3 | -6 | -7 | -5 | -2 | 0 | 0 | -4 | -7 | -8 | -5 | -2 | 0 | 0 | -3 | -6 | -5 | -3 | -1 | 0 | 0 | -2 | -3 | -2 | 0 | 0 | 0 | 0 |
| 48 | -3 | -6 | -7 | -5 | -2 | 0 | 0 | -4 | -7 | -7 | -4 | -1 | 0 | 0 | -3 | -5 | -4 | -2 | 0 | 0 | 0 | -2 | -2 | -1 | 1 | 1 | 0 | 0 |
| 52 | -3 | -5 | -6 | -4 | -1 | 0 | 0 | -3 | -6 | -6 | -3 | -1 | 0 | 0 | -3 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -1 | 0 | 2 | 1 | 0 | -1 |
| 56 | -3 | -5 | -5 | -3 | -1 | 0 | 0 | -3 | -5 | -5 | -2 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 1 | 0 | 0 | -1 | -1 | 1 | 2 | 2 | 0 | -1 |
| 60 | -2 | -3 | -4 | -2 | 0 | 0 | 1 | -2 | -4 | -3 | -1 | 0 | 0 | 0 | -2 | -2 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 2 | 3 | 2 | 0 | -1 |
| 64 | -2 | -3 | -3 | -1 | 0 | 0 | 1 | -2 | -3 | -2 | 0 | 1 | 0 | 0 | -1 | -1 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | -1 |
| 68 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 3 | 2 | 1 | -1 | -1 |
| 72 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 2 | 0 | -1 | -1 |
| 76 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -1 |
| 80 | -1 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | -2 | -2 | -1 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -1 |

**NOVEMBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2 | 3 | 3 | 2 | 0 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 |
| 20 | 1 | 3 | 2 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -3 | -3 | -3 | -1 | 0 | 0 |
| 24 | 0 | 1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 |
| 28 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | -1 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -2 | -2 | -1 | 0 | 0 |
| 32 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -4 | -3 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 0 | 0 |
| 36 | -1 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -2 | -1 | 0 | -1 | -2 | -3 | -2 | -2 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| 40 | -1 | -2 | -2 | -2 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | -1 | -1 | -2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 44 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 48 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 52 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 56 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 60 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 |
| 64 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | 0 | 0 |
| 68 | 2 | 3 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | -1 | 0 | 1 | 2 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | 0 | 0 |
| 72 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 76 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 80 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |

## AUGUST

| KM | \ | LONGITUDE 60 E | | | | | | | \ | LONGITUDE 90 E | | | | | | | \ | LONGITUDE 120 E | | | | | | | \ | LONGITUDE 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LAT= | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | | -80 | -70 | -60 | -50 | -40 | -30 | -20 | | -80 | -70 | -60 | -50 | -40 | -30 | -20E6 |
| 18 | | 0 | 1 | 1 | 1 | 1 | 1 | 1 | | 0 | 0 | -1 | -1 | 0 | 1 | 1 | | -1 | -2 | -5 | -4 | -2 | 0 | 0 | | -1 | -5 | -7 | -6 | -3 | -1 | 0 |
| 20 | | 0 | 0 | 0 | 1 | 1 | 1 | 1 | | 0 | 0 | -1 | -1 | 0 | 1 | 1 | | -1 | -3 | -5 | -4 | -2 | 0 | 0 | | -2 | -5 | -6 | -5 | -2 | -1 | 0 |
| 24 | | -3 | -4 | -2 | 0 | 0 | 0 | 0 | | -2 | -3 | -2 | -1 | 0 | 0 | 0 | | -1 | -2 | -3 | -3 | -1 | 0 | 0 | | 1 | -1 | -3 | -3 | -1 | 0 | 0 |
| 28 | | -3 | -4 | -3 | -1 | 0 | 0 | 0 | | -1 | -2 | -2 | -1 | -1 | 0 | 0 | | 1 | 1 | 0 | -1 | 0 | 0 | 0 | | 2 | 3 | 3 | 1 | 0 | 0 | 0 |
| 32 | | -2 | -3 | -2 | -1 | -1 | 0 | 0 | | -1 | -1 | 0 | -1 | -1 | -1 | 0 | | 1 | 2 | 3 | 2 | 0 | 0 | 0 | | 3 | 5 | 5 | 4 | 2 | 1 | 0 |
| 36 | | -2 | -2 | -1 | -1 | -1 | -1 | 0 | | 0 | 0 | 1 | 0 | -1 | -1 | -1 | | 2 | 3 | 4 | 3 | 1 | 0 | 0 | | 3 | 5 | 6 | 5 | 3 | 1 | 0 |
| 40 | | -1 | -1 | 0 | 0 | -1 | -1 | 0 | | 1 | 2 | 2 | 1 | 0 | -1 | 0 | | 3 | 4 | 4 | 3 | 2 | 0 | 0 | | 4 | 5 | 5 | 4 | 3 | 1 | 0 |
| 44 | | -1 | 1 | 2 | 1 | 0 | 0 | 0 | | 1 | 3 | 4 | 2 | 1 | 0 | 0 | | 3 | 4 | 4 | 3 | 2 | 1 | 0 | | 4 | 4 | 3 | 2 | 2 | 0 | 0 |
| 48 | | 0 | 2 | 3 | 2 | 0 | 0 | 0 | | 2 | 4 | 4 | 3 | 1 | 1 | 0 | | 3 | 5 | 4 | 3 | 2 | 1 | 0 | | 4 | 4 | 2 | 1 | 1 | 0 | -1 |
| 52 | | 1 | 2 | 4 | 3 | 1 | 0 | 0 | | 2 | 4 | 5 | 3 | 2 | 1 | 0 | | 3 | 4 | 3 | 2 | 1 | 0 | 0 | | 3 | 3 | 1 | -1 | -1 | -1 | -1 |
| 56 | | 1 | 2 | 4 | 3 | 1 | 0 | 0 | | 2 | 4 | 4 | 3 | 1 | 0 | 0 | | 3 | 4 | 3 | 1 | 1 | 0 | -1 | | 2 | 2 | 0 | -1 | -1 | -1 | -1 |
| 60 | | 1 | 2 | 3 | 1 | 0 | 0 | 0 | | 2 | 3 | 4 | 2 | 1 | 0 | 0 | | 2 | 3 | 2 | 1 | 1 | 0 | 0 | | 2 | 2 | -1 | -2 | -1 | -1 | -1 |
| 64 | | 0 | 1 | 2 | 0 | -1 | -1 | -1 | | 1 | 2 | 2 | 1 | 0 | 0 | 0 | | 2 | 2 | 1 | 1 | 1 | 1 | 0 | | 1 | 1 | -2 | -2 | 0 | -1 | 0 |
| 68 | | -1 | 0 | 0 | -1 | -2 | -1 | -1 | | 0 | 1 | 1 | 1 | 1 | 1 | 0 | | 1 | 1 | 0 | 1 | 2 | 1 | 1 | | 1 | 0 | -3 | -2 | 0 | 0 | 0 |
| 72 | | -2 | -2 | -1 | -3 | -3 | -1 | -1 | | -1 | -1 | 0 | 0 | 1 | 1 | 1 | | 0 | 0 | -1 | 0 | 2 | 2 | 1 | | 1 | -1 | -4 | -2 | 0 | 1 | 1 |
| 76 | | -3 | -3 | -2 | -3 | -3 | -1 | 0 | | -2 | -1 | -1 | 0 | 1 | 2 | 1 | | 0 | -1 | -2 | 0 | 3 | 2 | 2 | | 1 | -1 | -4 | -3 | 0 | 1 | 1 |
| 80 | | -4 | -4 | -3 | -3 | -3 | -1 | 0 | | -3 | -2 | -1 | 0 | 1 | 2 | 1 | | -1 | -1 | -2 | 0 | 3 | 2 | 2 | | 1 | -1 | -4 | -3 | 0 | 1 | 1 |

## SEPTEMBER

| KM | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | -2 | -8 | -12 | -8 | -4 | -1 | 0 | | -3 | -8 | -9 | -6 | -3 | -1 | 0 | | -3 | -4 | -4 | -2 | -1 | 0 | 0 | | -3 | 0 | 3 | 3 | 1 | 1 | 1 |
| 20 | | -4 | -9 | -11 | -8 | -4 | -1 | 0 | | -4 | -8 | -9 | -6 | -3 | -1 | 0 | | -3 | -4 | -3 | -2 | -1 | 0 | 0 | | -2 | 1 | 3 | 3 | 2 | 1 | 1 |
| 24 | | -3 | -7 | -8 | -6 | -3 | -1 | 0 | | -2 | -4 | -5 | -4 | -2 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 2 | 4 | 5 | 4 | 2 | 1 | 1 |
| 28 | | 0 | -3 | -4 | -3 | -1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 2 | 3 | 4 | 3 | 1 | 1 | 0 | | 3 | 6 | 7 | 5 | 3 | 1 | 0 |
| 32 | | 1 | 1 | 1 | 1 | 0 | 0 | 0 | | 2 | 3 | 4 | 3 | 2 | 1 | 0 | | 3 | 5 | 6 | 5 | 3 | 1 | 0 | | 3 | 6 | 8 | 6 | 3 | 1 | 0 |
| 36 | | 3 | 3 | 3 | 3 | 2 | 0 | 0 | | 4 | 5 | 6 | 5 | 2 | 1 | 0 | | 3 | 6 | 7 | 6 | 3 | 1 | 0 | | 3 | 5 | 7 | 5 | 2 | 1 | 0 |
| 40 | | 4 | 5 | 4 | 4 | 2 | 0 | 0 | | 4 | 6 | 6 | 5 | 2 | 0 | 0 | | 4 | 6 | 7 | 5 | 2 | 0 | 0 | | 2 | 4 | 6 | 4 | 2 | 0 | 0 |
| 44 | | 5 | 6 | 4 | 3 | 1 | 0 | -1 | | 5 | 6 | 5 | 4 | 1 | 0 | -1 | | 4 | 5 | 4 | 4 | 1 | 0 | -1 | | 2 | 3 | 4 | 2 | 1 | 0 | 0 |
| 48 | | 6 | 6 | 4 | 2 | 1 | -1 | -1 | | 6 | 6 | 5 | 3 | 0 | -1 | -1 | | 4 | 5 | 5 | 3 | 0 | -1 | -1 | | 2 | 3 | 3 | 2 | 0 | -1 | 0 |
| 52 | | 6 | 6 | 3 | 2 | 0 | -1 | -1 | | 6 | 6 | 4 | 2 | 0 | -1 | -1 | | 4 | 5 | 4 | 2 | 0 | -1 | -1 | | 2 | 3 | 3 | 1 | 0 | -1 | 0 |
| 56 | | 6 | 5 | 3 | 1 | 0 | -1 | -1 | | 6 | 5 | 3 | 1 | -1 | -2 | -1 | | 4 | 4 | 3 | 1 | -1 | -2 | -1 | | 1 | 2 | 2 | 1 | -1 | -1 | 0 |
| 60 | | 6 | 5 | 2 | 1 | 0 | -1 | -1 | | 5 | 4 | 2 | 0 | -1 | -2 | -1 | | 3 | 2 | 1 | 0 | -2 | -2 | -1 | | 0 | 0 | 0 | -1 | -2 | -1 | 0 |
| 64 | | 6 | 5 | 1 | 1 | 0 | -1 | -1 | | 4 | 3 | 0 | -1 | -1 | -2 | -1 | | 2 | 1 | 0 | -1 | -2 | -2 | -1 | | -1 | -2 | -2 | -2 | -3 | -2 | 0 |
| 68 | | 5 | 4 | 0 | 0 | -1 | -1 | | | 3 | 1 | -1 | -2 | -2 | -2 | -1 | | 0 | -1 | -2 | -2 | -3 | -2 | -1 | | -3 | -4 | -3 | -3 | -3 | -1 | 0 |
| 72 | | 4 | 3 | 0 | -1 | -1 | -1 | -1 | | 2 | 0 | -2 | -2 | -2 | -2 | -1 | | -1 | -2 | -3 | -3 | -3 | -2 | -1 | | -4 | -5 | -4 | -4 | -3 | -1 | 0 |
| 76 | | 4 | 3 | -1 | -1 | -1 | -2 | -1 | | 1 | -1 | -3 | -3 | -2 | -2 | -1 | | -2 | -3 | -4 | -3 | -3 | -2 | -1 | | -4 | -5 | -5 | -4 | -3 | -1 | 0 |
| 80 | | 3 | 2 | -1 | -2 | -1 | -2 | -1 | | 0 | -1 | -3 | -3 | -2 | -2 | -1 | | -2 | -4 | -4 | -4 | -3 | -2 | -1 | | -4 | -5 | -5 | -4 | -3 | -1 | 0 |

## OCTOBER

| KM | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | -3 | -4 | -5 | -3 | -1 | 0 | 0 | | -3 | -5 | -5 | -3 | -1 | 0 | 0 | | -3 | -4 | -4 | -3 | -1 | 0 | 0 | | -2 | -2 | -1 | 0 | 0 | 0 | 1 |
| 20 | | -3 | -5 | -5 | -3 | -1 | 0 | 0 | | -3 | -5 | -5 | -3 | -1 | 0 | 0 | | -2 | -3 | -3 | -2 | -1 | 0 | 0 | | -1 | -1 | 0 | 0 | 0 | 0 | 1 |
| 24 | | -4 | -5 | -5 | -3 | -1 | 0 | 0 | | -2 | -3 | -3 | -2 | -1 | 0 | 0 | | 0 | 0 | -1 | -1 | 0 | 0 | 0 | | 2 | 3 | 3 | 1 | 1 | 1 | 0 |
| 28 | | -3 | -4 | -4 | -2 | -1 | 0 | 0 | | -1 | -1 | -1 | 0 | 0 | 0 | 0 | | 2 | 3 | 3 | 1 | 1 | 1 | 0 | | 4 | 4 | 6 | 3 | 2 | 1 | 0 |
| 32 | | -2 | -3 | -2 | -1 | 0 | 0 | 0 | | 0 | 1 | 1 | 1 | 1 | 0 | 0 | | 3 | 5 | 5 | 4 | 2 | 1 | 0 | | 5 | 8 | 8 | 5 | 3 | 1 | 0 |
| 36 | | -2 | -2 | -1 | 0 | 0 | 0 | 0 | | 1 | 2 | 2 | 3 | 2 | 1 | 0 | | 3 | 5 | 6 | 4 | 3 | 1 | 0 | | 5 | 8 | 8 | 5 | 3 | 1 | 0 |
| 40 | | -1 | -1 | 0 | 1 | 1 | 0 | 0 | | 1 | 2 | 3 | 3 | 2 | 1 | 0 | | 3 | 5 | 5 | 4 | 2 | 1 | 0 | | 4 | 7 | 7 | 5 | 3 | 1 | 0 |
| 44 | | -1 | 0 | 1 | 2 | 1 | 0 | 0 | | 1 | 2 | 2 | 2 | 1 | 0 | 0 | | 3 | 4 | 4 | 3 | 2 | 1 | 0 | | 3 | 5 | 5 | 3 | 2 | 0 | 0 |
| 48 | | 0 | 0 | 2 | 2 | 1 | 0 | 0 | | 1 | 2 | 2 | 2 | 1 | 0 | 0 | | 2 | 2 | 3 | 2 | 1 | 0 | 0 | | 3 | 4 | 4 | 2 | 1 | 0 | 0 |
| 52 | | 0 | 1 | 2 | 3 | 1 | 0 | -1 | | 1 | 1 | 2 | 2 | 1 | 0 | 0 | | 2 | 2 | 1 | 1 | 1 | 0 | 0 | | 3 | 4 | 2 | 1 | 0 | 0 | 0 |
| 56 | | 0 | 1 | 2 | 2 | 0 | 0 | -1 | | 1 | 1 | 2 | 2 | 1 | 0 | -1 | | 2 | 1 | 0 | 0 | 0 | 0 | 0 | | 2 | 1 | 0 | -1 | 0 | 0 | 0 |
| 60 | | 0 | 1 | 2 | 3 | 1 | 0 | -1 | | 1 | 1 | 0 | 1 | 0 | 0 | -1 | | 2 | 0 | -1 | -1 | -1 | -1 | -1 | | 2 | 1 | 0 | -1 | -1 | -1 | 0 |
| 64 | | 1 | 1 | 2 | 2 | 1 | 0 | -1 | | 1 | 0 | 0 | 0 | 0 | 0 | -1 | | 2 | -1 | -2 | -1 | -1 | 0 | -1 | | 1 | 0 | -1 | -2 | -1 | 0 | 0 |
| 68 | | 1 | 1 | 2 | 2 | 0 | 0 | -1 | | 1 | 0 | -1 | 0 | 0 | 0 | -1 | | 1 | -1 | -3 | -2 | -1 | 0 | 0 | | 1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 72 | | 0 | 1 | 2 | 1 | 0 | -1 | -1 | | 0 | 0 | -1 | 0 | 0 | 0 | 0 | | 1 | -2 | -3 | -2 | -1 | 0 | 0 | | 1 | -1 | -2 | -2 | -1 | 0 | 0 |
| 76 | | 0 | 1 | 1 | 1 | 0 | -1 | -1 | | 0 | -1 | -1 | -1 | -1 | -1 | 0 | | 0 | -2 | -3 | -2 | -1 | 0 | 0 | | 0 | -1 | -2 | -2 | 0 | 1 | 0 |
| 80 | | 0 | 0 | 1 | 1 | 0 | -1 | -1 | | 0 | -1 | -1 | -1 | -1 | -1 | 0 | | 0 | -2 | -3 | -2 | -1 | 0 | 0 | | 0 | -1 | -2 | -2 | 0 | 1 | 1 |

## NOVEMBER

| KM | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 | \ | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | -2 | -3 | -4 | -3 | -1 | 0 | 0 | | -2 | -3 | -3 | -2 | 0 | 0 | 1 | | -1 | -2 | -2 | -1 | 0 | 0 | 1 | | -1 | -1 | -1 | 0 | 0 | 0 | 1 |
| 20 | | -2 | -3 | -4 | -3 | -1 | 0 | 0 | | -1 | -3 | -3 | -2 | 0 | 0 | 1 | | -1 | -2 | -2 | -1 | 0 | 0 | 0 | | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 24 | | -1 | -2 | -2 | -2 | 0 | 0 | 0 | | -1 | -1 | -1 | -1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 28 | | -1 | -1 | -1 | 0 | 0 | 0 | 0 | | 0 | 1 | 1 | 1 | 1 | 0 | 0 | | 1 | 2 | 2 | 2 | 1 | 0 | 0 | | 2 | 3 | 3 | 2 | 1 | 0 | 0 |
| 32 | | -1 | 0 | 1 | 1 | 0 | 0 | 0 | | 1 | 2 | 3 | 2 | 1 | 0 | 0 | | 2 | 3 | 4 | 3 | 1 | 0 | 0 | | 2 | 4 | 4 | 3 | 1 | 0 | 0 |
| 36 | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | 1 | 2 | 3 | 2 | 1 | 0 | 0 | | 2 | 3 | 3 | 2 | 1 | 0 | 0 | | 2 | 3 | 3 | 2 | 1 | 0 | 0 |
| 40 | | 0 | 1 | 2 | 1 | 0 | 0 | 0 | | 1 | 2 | 3 | 2 | 1 | 0 | 0 | | 2 | 3 | 3 | 2 | 1 | 0 | 0 | | 1 | 2 | 2 | 1 | 0 | 0 | 0 |
| 44 | | 0 | 1 | 1 | 1 | 0 | 0 | 0 | | 0 | 1 | 2 | 1 | 0 | 0 | 0 | | 1 | 1 | 1 | 1 | 0 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | 0 | -1 | 0 | 0 | 0 | 0 | 0 | | 0 | -1 | 0 | 0 | 0 | 0 | 0 | | 0 | -1 | -1 | -1 | 0 | 0 | 0 |
| 52 | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | -1 | 0 | 0 | 0 | 0 | 0 | | -1 | -2 | -1 | -1 | 0 | 0 | 0 | | -1 | -2 | -2 | -1 | 0 | 0 | 0 |
| 56 | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | -1 | -1 | 0 | 0 | 0 | 0 | | -1 | -2 | -2 | -1 | 0 | 0 | 0 | | -1 | -3 | -3 | -2 | -1 | 0 | 0 |
| 60 | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | -1 | -1 | 0 | 0 | 0 | 0 | | -1 | -2 | -2 | -1 | 0 | 0 | 0 | | -1 | -3 | -3 | -2 | -1 | 0 | 0 |
| 64 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | -1 | -1 | -1 | 0 | 0 | 0 | 0 | | -1 | -3 | -2 | -1 | 0 | 0 | 0 | | -2 | -3 | -3 | -2 | -1 | 0 | 0 |
| 68 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | -1 | -2 | -1 | -1 | 0 | 0 | 0 | | -1 | -3 | -2 | -1 | 0 | 0 | 0 | | -2 | -3 | -3 | -2 | 0 | 0 | 0 |
| 72 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | -1 | -2 | -1 | -1 | 0 | 1 | 0 | | -1 | -3 | -3 | -1 | 0 | 0 | 0 | | -2 | -3 | -3 | -2 | 0 | 0 | 0 |
| 76 | | -1 | 0 | 0 | 0 | 0 | 0 | 1 | | -1 | -2 | -1 | -1 | 0 | 1 | 0 | | -1 | -3 | -3 | -1 | 0 | 0 | 0 | | -2 | -3 | -3 | -2 | 0 | 0 | 0 |
| 80 | | -1 | 0 | 0 | 0 | 0 | 0 | 1 | | -1 | -2 | -1 | -1 | 0 | 0 | 0 | | -1 | -3 | -3 | -1 | 0 | 0 | 0 | | -2 | -3 | -3 | -1 | 0 | 0 | 0 |

**SEPTEMBER**

| KM LAT= | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LONGITUDE 180 DEG | | | | | | | | LONGITUDE 150 W | | | | | | | | LONGITUDE 120 W | | | | | | | | LONGITUDE 90 W | | | | | | | |
| 18 | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| 20 | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 24 | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | -1 | 0 |
| 28 | | 0 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | | 0 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | | 1 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | | 1 | 1 | 1 | 1 | 1 | 1 | 0 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | | 1 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | | 1 | 1 | 1 | 1 | 1 | 0 | 0 | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 | 1 | 0 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 | 1 | 0 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 1 | 1 | 1 | 1 | 0 | 0 | -1 | | 0 | 1 | 0 | 1 | 1 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 1 | 1 | 1 | 1 | 1 | 0 | -1 | | 0 | 1 | 1 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 76 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 1 | 1 | 1 | 1 | 1 | 0 | -1 | | 0 | 1 | 1 | 1 | 1 | 0 | 0 | | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 80 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | 1 | 1 | 1 | 1 | 1 | 0 | -1 | | 1 | 1 | 1 | 1 | 1 | 0 | 0 | | 0 | 1 | 0 | 1 | 0 | 0 | 0 |

**OCTOBER**

| KM LAT= | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 0 | 1 | 1 | -1 | -1 | -1 | -1 | | 0 | 0 | 1 | 0 | 0 | -1 | -1 | | 0 | 0 | 1 | 1 | 0 | -1 | -1 | | 0 | -1 | 0 | 0 | -1 | -1 | 0 |
| 20 | | 0 | 1 | 1 | 0 | -1 | -1 | -1 | | 0 | 0 | 1 | 0 | 0 | -1 | -1 | | 0 | 0 | 1 | 1 | 0 | -1 | -1 | | 0 | 0 | 0 | 0 | 0 | -1 | 0 |
| 24 | | 0 | 1 | 1 | 0 | 0 | -1 | -1 | | 0 | 1 | 1 | 1 | 1 | 0 | -1 | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 28 | | 1 | 1 | 1 | 1 | 1 | 1 | 0 | | 0 | 1 | 1 | 2 | 2 | 1 | 0 | | 0 | 0 | 1 | 1 | 2 | 1 | 1 | | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 32 | | 0 | 1 | 1 | 3 | 3 | 3 | 1 | | 0 | 1 | 1 | 2 | 3 | 3 | 2 | | 0 | 0 | 0 | 1 | 2 | 2 | 2 | | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 36 | | 0 | 0 | 1 | 4 | 6 | 6 | 3 | | 0 | 0 | 1 | 2 | 4 | 5 | 3 | | 0 | 0 | 0 | 0 | 1 | 2 | 2 | | 0 | 0 | -1 | -1 | -1 | 0 | 0 |
| 40 | | 0 | 0 | 1 | 4 | 7 | 8 | 5 | | 0 | 0 | 0 | 1 | 4 | 5 | 3 | | 0 | 0 | -1 | -2 | -1 | 1 | 1 | | 0 | 0 | -1 | -3 | -4 | -3 | -2 |
| 44 | | 0 | 0 | 0 | 4 | 8 | 9 | 6 | | 0 | 0 | -1 | 0 | 3 | 4 | 3 | | 0 | 0 | -2 | -3 | -3 | -2 | 0 | | 0 | 0 | -2 | -5 | -6 | -4 | -3 |
| 48 | | 0 | -1 | 0 | 3 | 7 | 9 | 5 | | 0 | -1 | -1 | -1 | 1 | 3 | 2 | | 0 | 0 | -2 | -4 | -4 | -3 | -1 | | 0 | 0 | -2 | -5 | -8 | -7 | -4 |
| 52 | | 0 | -1 | 0 | 3 | 7 | 8 | 5 | | 0 | -1 | -2 | -1 | 1 | 2 | 2 | | 0 | -1 | -2 | -5 | -5 | -4 | -2 | | 0 | 0 | -3 | -6 | -8 | -8 | -4 |
| 56 | | 0 | -1 | 0 | 2 | 6 | 7 | 5 | | 0 | -1 | -2 | -2 | 0 | 0 | 1 | | 0 | -1 | -3 | -5 | -6 | -6 | -3 | | 1 | 0 | -3 | -7 | -9 | -9 | -5 |
| 60 | | 0 | -1 | -1 | 2 | 5 | 6 | 4 | | 0 | -1 | -2 | -3 | -1 | -1 | 0 | | 1 | -1 | -3 | -6 | -7 | -6 | -3 | | 1 | 0 | -3 | -7 | -10 | -9 | -5 |
| 64 | | 0 | -1 | -1 | 1 | 4 | 5 | 4 | | 0 | -1 | -3 | -3 | -2 | -1 | 0 | | 1 | -1 | -4 | -6 | -7 | -6 | -4 | | 1 | 0 | -3 | -7 | -9 | -8 | -5 |
| 68 | | 0 | -1 | -2 | 0 | 3 | 4 | 4 | | 0 | -2 | -3 | -4 | -2 | -1 | 0 | | 0 | -1 | -4 | -6 | -7 | -5 | -3 | | 1 | 0 | -3 | -7 | -9 | -7 | -5 |
| 72 | | 0 | -2 | -2 | 0 | 2 | 4 | 3 | | 0 | -2 | -3 | -4 | -3 | -1 | 0 | | 0 | -1 | -4 | -6 | -6 | -5 | -3 | | 0 | 0 | -3 | -7 | -8 | -7 | -5 |
| 76 | | 0 | -1 | -2 | -1 | 2 | 4 | 3 | | 0 | -2 | -3 | -4 | -2 | 0 | 0 | | 0 | -1 | -4 | -6 | -6 | -4 | -3 | | 0 | 0 | -3 | -6 | -8 | -6 | -5 |
| 80 | | 0 | -1 | -2 | -1 | 2 | 4 | 3 | | 0 | -1 | -3 | -3 | -2 | 0 | 0 | | 0 | -1 | -3 | -5 | -6 | -3 | -2 | | 1 | 0 | -2 | -6 | -7 | -5 | -4 |

**NOVEMBER**

| KM LAT= | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 1 | 2 | 1 | -1 | -1 | -2 | -1 | | 0 | 1 | 2 | 1 | 0 | -1 | -1 | | -1 | 0 | 2 | 1 | 0 | -1 | -1 | | -1 | -1 | 1 | 1 | 0 | -1 | -1 |
| 20 | | 1 | 2 | 1 | -1 | -1 | -1 | -1 | | 0 | 1 | 2 | 1 | 0 | -1 | -1 | | -1 | 0 | 2 | 2 | 1 | -1 | -1 | | -1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 24 | | 1 | 2 | 2 | 0 | 0 | 0 | 0 | | 0 | 1 | 2 | 2 | 2 | 1 | 0 | | 0 | 0 | 1 | 2 | 2 | 1 | 1 | | -1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 28 | | 1 | 2 | 2 | 3 | 3 | 3 | 2 | | 1 | 1 | 3 | 3 | 5 | 5 | 3 | | 0 | 0 | 1 | 2 | 4 | 5 | 4 | | 0 | 0 | 0 | 1 | 2 | 4 | 3 |
| 32 | | 0 | 1 | 3 | 6 | 8 | 7 | 4 | | 0 | 0 | 1 | 5 | 9 | 10 | 6 | | 0 | 0 | 0 | 2 | 6 | 8 | 6 | | 0 | -1 | -1 | 0 | 3 | 5 | 5 |
| 36 | | 0 | 0 | 2 | 8 | 12 | 12 | 7 | | 0 | 0 | 0 | 6 | 12 | 13 | 9 | | 0 | -1 | -1 | 2 | 7 | 10 | 7 | | 0 | -1 | -2 | -1 | 2 | 4 | 4 |
| 40 | | -1 | -1 | 2 | 9 | 15 | 15 | 9 | | 0 | -1 | 0 | 5 | 12 | 15 | 9 | | 0 | -1 | -2 | 1 | 6 | 9 | 7 | | 0 | -1 | -3 | -2 | 0 | 2 | 2 |
| 44 | | -1 | -1 | 1 | 8 | 15 | 15 | 9 | | -1 | -2 | -1 | 4 | 11 | 13 | 9 | | -1 | -2 | -2 | 1 | 5 | 7 | 5 | | 0 | -1 | -3 | -3 | -2 | 0 | 1 |
| 48 | | -1 | -2 | 1 | 7 | 14 | 15 | 9 | | -1 | -2 | -1 | 4 | 10 | 12 | 8 | | -1 | -2 | -2 | 1 | 4 | 6 | 4 | | 0 | -2 | -3 | -3 | -2 | -1 | 0 |
| 52 | | -2 | -2 | 0 | 7 | 14 | 14 | 9 | | -1 | -2 | -1 | 4 | 10 | 11 | 7 | | -1 | -2 | -2 | 1 | 4 | 5 | 4 | | 0 | -2 | -3 | -3 | -3 | -2 | -1 |
| 56 | | -2 | -2 | 0 | 6 | 14 | 15 | 8 | | -2 | -2 | -1 | 4 | 9 | 11 | 7 | | -1 | -2 | -2 | 0 | 2 | 4 | 3 | | 0 | -1 | -3 | -4 | -4 | -3 | -2 |
| 60 | | -2 | -2 | -1 | 6 | 13 | 14 | 8 | | -2 | -2 | -2 | 3 | 8 | 9 | 6 | | -1 | -2 | -3 | -1 | 1 | 2 | 2 | | 0 | -2 | -4 | -5 | -6 | -5 | -2 |
| 64 | | -2 | -2 | -1 | 5 | 12 | 13 | 7 | | -2 | -2 | -2 | 2 | 6 | 7 | 4 | | -1 | -2 | -3 | -2 | -1 | 0 | 1 | | 0 | -2 | -4 | -6 | -7 | -6 | -3 |
| 68 | | -1 | -1 | -1 | 4 | 10 | 11 | 6 | | -1 | -1 | -2 | 1 | 4 | 5 | 3 | | -1 | -2 | -3 | -3 | -3 | -1 | 0 | | 0 | -1 | -3 | -6 | -8 | -7 | -3 |
| 72 | | -1 | -1 | 0 | 3 | 8 | 10 | 5 | | -1 | -1 | -1 | 0 | 2 | 4 | 2 | | -1 | -1 | -2 | -3 | -4 | -3 | -1 | | 0 | -1 | -3 | -6 | -8 | -7 | -3 |
| 76 | | 0 | 0 | 0 | 3 | 6 | 8 | 4 | | -1 | -1 | -1 | -1 | 1 | 3 | 2 | | -1 | -1 | -2 | -3 | -4 | -3 | -1 | | 0 | -1 | -3 | -5 | -7 | -7 | -3 |
| 80 | | 0 | 0 | 0 | 2 | 5 | 7 | 4 | | 0 | 0 | -1 | -1 | 1 | 2 | 1 | | 0 | -1 | -2 | -3 | -4 | -3 | -1 | | 0 | -1 | -2 | -5 | -7 | -7 | -3 |

**DECEMBER**

| KM LAT= | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | \| | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 1 | 2 | -1 | -4 | -4 | -2 | 0 | | 0 | 1 | 0 | -3 | -4 | -3 | -1 | | -1 | 0 | 0 | -1 | -3 | -4 | -2 | | -1 | 0 | 1 | 0 | -2 | -3 | -2 |
| 20 | | 1 | 2 | 0 | -4 | -4 | -2 | 0 | | 0 | 1 | 0 | -2 | -3 | -2 | -1 | | 0 | 0 | 0 | -1 | -2 | -3 | -2 | | -1 | 0 | 1 | 1 | -1 | -2 | -2 |
| 24 | | 1 | 2 | 1 | -1 | 0 | 0 | 1 | | 1 | 2 | 2 | 1 | 2 | 2 | 1 | | 0 | 1 | 2 | 2 | 2 | 1 | 1 | | -1 | 0 | 2 | 2 | 1 | 1 | 0 |
| 28 | | 1 | 2 | 3 | 4 | 6 | 6 | 3 | | 0 | 2 | 3 | 6 | 8 | 9 | 5 | | 0 | 1 | 3 | 5 | 7 | 8 | 5 | | 0 | 0 | 1 | 3 | 4 | 4 | 3 |
| 32 | | 0 | 1 | 4 | 9 | 12 | 12 | 6 | | 0 | 1 | 4 | 10 | 15 | 15 | 8 | | 0 | 0 | 2 | 7 | 11 | 12 | 7 | | 0 | -1 | 0 | 1 | 4 | 5 | 4 |
| 36 | | 0 | 0 | 5 | 13 | 18 | 16 | 8 | | 0 | 0 | 3 | 11 | 19 | 18 | 9 | | 0 | -1 | 0 | 5 | 11 | 11 | 6 | | 0 | -1 | -3 | -3 | 0 | 2 | 2 |
| 40 | | -1 | 0 | 4 | 14 | 19 | 17 | 9 | | -1 | -1 | 1 | 9 | 17 | 16 | 8 | | -1 | -2 | -3 | 1 | 7 | 7 | 4 | | 0 | -2 | -5 | -7 | -5 | -2 | 0 |
| 44 | | -1 | -1 | 3 | 12 | 18 | 16 | 9 | | -1 | -2 | -1 | 6 | 13 | 12 | 7 | | -1 | -3 | -5 | -3 | 2 | 3 | 3 | | 0 | -2 | -7 | -10 | -8 | -5 | -1 |
| 48 | | -1 | -1 | 2 | 9 | 15 | 14 | 9 | | -1 | -3 | -3 | 3 | 9 | 9 | 6 | | -1 | -4 | -7 | -6 | -1 | 1 | 2 | | 0 | -2 | -7 | -11 | -9 | -6 | -2 |
| 52 | | -1 | -2 | 1 | 8 | 13 | 12 | 8 | | -1 | -3 | -4 | 1 | 7 | 7 | 5 | | -1 | -4 | -7 | -7 | -3 | 0 | 1 | | 0 | -2 | -7 | -11 | -9 | -6 | -3 |
| 56 | | -1 | -2 | 0 | 6 | 11 | 11 | 8 | | -1 | -4 | -4 | -1 | 5 | 6 | 5 | | -1 | -4 | -8 | -8 | -4 | -2 | 0 | | 0 | -1 | -7 | -11 | -11 | -9 | -4 |
| 60 | | -1 | -2 | -1 | 4 | 9 | 10 | 8 | | -1 | -4 | -5 | -2 | 2 | 4 | 4 | | -1 | -4 | -8 | -9 | -6 | -3 | 0 | | 0 | -1 | -6 | -10 | -11 | -9 | -5 |
| 64 | | -1 | -2 | -1 | 3 | 7 | 9 | 7 | | -1 | -3 | -5 | -3 | 1 | 3 | 4 | | -1 | -3 | -7 | -9 | -6 | -4 | -1 | | 0 | 0 | -5 | -9 | -10 | -9 | -5 |
| 68 | | -1 | -2 | -2 | 2 | 6 | 8 | 7 | | -1 | -3 | -5 | -3 | 0 | 3 | 4 | | -1 | -2 | -4 | -8 | -6 | -4 | -1 | | 0 | 0 | -4 | -8 | -9 | -8 | -5 |
| 72 | | 0 | -2 | -2 | 1 | 5 | 8 | 7 | | -1 | -2 | -5 | -3 | 0 | 2 | 3 | | 0 | -2 | -6 | -7 | -6 | -4 | -1 | | 0 | 1 | -4 | -7 | -8 | -8 | -5 |
| 74 | | 0 | -1 | -2 | 1 | 4 | 7 | 6 | | 0 | -2 | -4 | -2 | 0 | 3 | 3 | | 0 | -1 | -6 | -6 | -5 | -3 | -1 | | 0 | 1 | -4 | -7 | -8 | -8 | -5 |
| 80 | | 0 | -1 | -2 | 1 | 4 | 6 | 6 | | 0 | -1 | -4 | -1 | 1 | 3 | 3 | | 0 | -1 | -6 | -5 | -4 | -3 | -1 | | 1 | 1 | -4 | -6 | -7 | -7 | -4 |

## SEPTEMBER

| KM LAT= | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 |
| 20 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 |
| 24 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 40 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 44 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 |
| 56 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 76 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |
| 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 |

## OCTOBER

| KM LAT= | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 0 | 1 | 1 | 2 | 2 | -1 | -1 | 0 | 1 | 2 | 3 | 2 | -1 | -1 | -1 | 1 | 2 | 2 | 1 |
| 20 | 0 | -1 | 0 | 1 | 0 | 1 | 1 | -1 | -1 | 0 | 1 | 2 | 2 | 2 | -1 | -1 | 0 | 1 | 2 | 3 | 2 | -1 | -1 | -1 | 1 | 2 | 2 | 1 |
| 24 | 0 | -1 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 1 | 2 | 3 | 2 | -1 | -1 | 0 | 1 | 3 | 3 | 2 | 0 | -1 | -1 | 0 | 1 | 2 | 1 |
| 28 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 0 | -1 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | -1 |
| 36 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -2 | 0 | 0 | 0 | -2 | -3 | -4 | -2 |
| 40 | 0 | 0 | -1 | -3 | -5 | -5 | -3 | 0 | 0 | 0 | -2 | -4 | -5 | -4 | 0 | 1 | 0 | -2 | -4 | -5 | -4 | 0 | 0 | 0 | -2 | -4 | -5 | -3 |
| 44 | 0 | 0 | -1 | -4 | -7 | -7 | -5 | 0 | 1 | -1 | -3 | -6 | -8 | -5 | 0 | 1 | 0 | -2 | -5 | -7 | -4 | 0 | 1 | 1 | -1 | -4 | -5 | -3 |
| 48 | 0 | 0 | -2 | -5 | -8 | -9 | -5 | 1 | 1 | -1 | -4 | -7 | -8 | -5 | 0 | 1 | 0 | -2 | -6 | -7 | -5 | 0 | 1 | 1 | 0 | -3 | -4 | -3 |
| 52 | 1 | 0 | -2 | -6 | -9 | -9 | -5 | 1 | 1 | 0 | -4 | -8 | -9 | -5 | 0 | 1 | 1 | -2 | -6 | -7 | -4 | 0 | 1 | 1 | 1 | -2 | -4 | -2 |
| 56 | 1 | 0 | -2 | -6 | -10 | -10 | -6 | 1 | 1 | 0 | -4 | -9 | -9 | -5 | 0 | 1 | 1 | -2 | -6 | -7 | -4 | 0 | 1 | 2 | 1 | -1 | -3 | -2 |
| 60 | 1 | 1 | -2 | -7 | -10 | -10 | -6 | 1 | 1 | 0 | -4 | -8 | -9 | -5 | 1 | 1 | 1 | -1 | -5 | -6 | -3 | 0 | 1 | 2 | 2 | -1 | -2 | -1 |
| 64 | 1 | 1 | -2 | -6 | -10 | -9 | -6 | 1 | 2 | 0 | -4 | -8 | -8 | -5 | 1 | 2 | 2 | -1 | -4 | -6 | -3 | 0 | 1 | 3 | 3 | 0 | -1 | -1 |
| 68 | 1 | 1 | -2 | -6 | -9 | -8 | -5 | 1 | 2 | 0 | -3 | -7 | -7 | -4 | 1 | 2 | 2 | 0 | -4 | -5 | -3 | 0 | 1 | 3 | 3 | 1 | -1 | -1 |
| 72 | 1 | 1 | -1 | -5 | -8 | -7 | -5 | 2 | 2 | 1 | -2 | -6 | -6 | -4 | 1 | 2 | 3 | 1 | -3 | -4 | -2 | 0 | 2 | 3 | 4 | 1 | -1 | -1 |
| 76 | 1 | 1 | -1 | -4 | -7 | -6 | -5 | 2 | 2 | 1 | -2 | -5 | -5 | -4 | 1 | 2 | 3 | 1 | -2 | -3 | -2 | 0 | 1 | 3 | 4 | 1 | -1 | -1 |
| 80 | 1 | 1 | -1 | -4 | -7 | -5 | -4 | 1 | 2 | 2 | -1 | -5 | -4 | -4 | 1 | 2 | 3 | 2 | -2 | -3 | -3 | 0 | 1 | 3 | 3 | 1 | -2 | -1 |

## NOVEMBER

| KM LAT= | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 2 | 2 | 2 | 1 | -1 | -2 | 0 | 3 | 3 | 3 | 2 | -1 | -2 | 0 | 2 | 3 | 3 | 2 |
| 20 | -1 | -1 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | 0 | 2 | 2 | 3 | 1 | -1 | -2 | 0 | 3 | 3 | 4 | 2 | -1 | -2 | 0 | 2 | 3 | 3 | 1 |
| 24 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | -1 | 0 | 2 | 3 | 3 | 2 | -1 | -1 | 0 | 2 | 3 | 3 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | 0 |
| 28 | -1 | -1 | 0 | 1 | 2 | 3 | 2 | -1 | -1 | 0 | 1 | 2 | 2 | 1 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -2 |
| 32 | 0 | -1 | -1 | -1 | 1 | 2 | 2 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | -1 | -2 | -3 | -4 | -3 | 0 | 0 | -2 | -4 | -7 | -7 | -5 |
| 36 | 0 | -1 | -2 | -3 | -2 | -1 | 0 | 0 | 0 | -2 | -4 | -5 | -5 | -3 | 0 | 0 | -2 | -5 | -7 | -8 | -5 | 0 | 1 | -1 | -6 | -10 | -10 | -7 |
| 40 | 0 | -1 | -3 | -4 | -5 | -4 | -2 | 0 | 0 | -3 | -6 | -8 | -8 | -5 | 1 | 1 | -2 | -7 | -10 | -10 | -7 | 1 | 1 | -1 | -7 | -11 | -11 | -8 |
| 44 | 0 | -1 | -3 | -5 | -6 | -6 | -3 | 1 | 0 | -3 | -7 | -9 | -9 | -4 | 1 | 1 | -2 | -7 | -11 | -11 | -7 | 1 | 2 | 0 | -6 | -11 | -11 | -7 |
| 48 | 0 | -1 | -3 | -5 | -7 | -7 | -4 | 1 | 0 | -3 | -7 | -10 | -10 | -6 | 1 | 1 | -2 | -7 | -12 | -11 | -7 | 1 | 2 | 0 | -5 | -11 | -11 | -7 |
| 52 | 0 | -1 | -3 | -6 | -8 | -7 | -4 | 1 | 0 | -3 | -8 | -11 | -11 | -6 | 2 | 2 | -1 | -7 | -12 | -12 | -7 | 2 | 3 | 1 | -5 | -10 | -10 | -6 |
| 56 | 1 | -1 | -3 | -7 | -10 | -9 | -5 | 1 | 1 | -3 | -8 | -13 | -12 | -7 | 2 | 2 | -1 | -7 | -12 | -12 | -7 | 2 | 3 | 2 | -4 | -10 | -10 | -6 |
| 60 | 1 | -1 | -4 | -8 | -11 | -10 | -5 | 2 | 1 | -2 | -9 | -13 | -12 | -6 | 2 | 3 | 0 | -7 | -12 | -11 | -6 | 2 | 4 | 3 | -3 | -8 | -9 | -5 |
| 64 | 1 | 0 | -3 | -8 | -11 | -10 | -5 | 2 | 1 | -2 | -8 | -13 | -11 | -6 | 2 | 3 | 1 | -6 | -11 | -10 | -5 | 2 | 3 | 3 | -2 | -7 | -7 | -4 |
| 68 | 1 | 0 | -3 | -8 | -11 | -10 | -5 | 1 | 1 | -1 | -7 | -11 | -10 | -5 | 2 | 2 | 1 | -5 | -9 | -9 | -5 | 1 | 3 | 3 | -1 | -5 | -6 | -3 |
| 72 | 1 | 0 | -2 | -7 | -10 | -9 | -4 | 1 | 1 | -1 | -6 | -10 | -9 | -5 | 1 | 2 | 1 | -4 | -7 | -7 | -4 | 1 | 2 | 3 | 0 | -3 | -4 | -3 |
| 76 | 1 | 0 | -2 | -6 | -9 | -8 | -4 | 1 | 1 | 0 | -5 | -8 | -8 | -4 | 1 | 2 | 1 | -3 | -6 | -6 | -3 | 0 | 2 | 2 | 0 | -2 | -3 | -2 |
| 80 | 0 | 0 | -1 | -5 | -8 | -7 | -4 | 1 | 1 |  | -4 | -6 | -6 | -3 | 2 | 2 | -2 | -4 | -4 | -3 | | 0 | 2 | 2 | 1 | -1 | -2 | -2 |

## DECEMBER

| KM LAT= | LONGITUDE 60 W | | | | | | | LONGITUDE 30 W | | | | | | | LONGITUDE 0 DEG | | | | | | | LONGITUDE 30 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | -1 | 0 | 2 | 2 | 0 | -1 | -1 | -1 | 0 | 3 | 5 | 4 | 2 | 0 | -1 | -1 | 3 | 6 | 6 | 4 | 1 | -1 | -2 | 1 | 5 | 7 | 4 | 2 |
| 20 | -1 | 0 | 2 | 3 | 1 | -1 | -1 | -1 | 0 | 3 | 5 | 4 | 2 | 1 | -1 | -1 | 2 | 6 | 6 | 4 | 1 | -1 | -2 | 0 | 4 | 6 | 4 | 2 |
| 24 | -1 | 0 | 1 | 2 | 2 | 1 | 0 | -1 | -1 | 1 | 3 | 3 | 2 | 1 | -1 | -1 | 0 | 3 | 4 | 3 | 1 | -1 | -2 | -1 | 1 | 2 | 2 | 0 |
| 28 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -2 | -1 | -2 | -2 | 0 | -1 | -2 | -3 | -4 | -4 | -3 |
| 32 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | -1 | -3 | -5 | -5 | -5 | -3 | 0 | -1 | -3 | -5 | -7 | -7 | -4 | 0 | 0 | -3 | -6 | -8 | -8 | -5 |
| 36 | 0 | -1 | -4 | -7 | -7 | -6 | -2 | 0 | -1 | -4 | -8 | -10 | -9 | -4 | 1 | 0 | -3 | -7 | -10 | -9 | -6 | 1 | 1 | -1 | -6 | -10 | -10 | -6 |
| 40 | 0 | -1 | -5 | -10 | -11 | -8 | -3 | 1 | 0 | -3 | -9 | -11 | -10 | -5 | 1 | 1 | -1 | -7 | -10 | -10 | -6 | 1 | 2 | 0 | -5 | -9 | -9 | -7 |
| 44 | 0 | -1 | -5 | -11 | -12 | -9 | -4 | 1 | 1 | -2 | -8 | -11 | -10 | -6 | 1 | 2 | 1 | -4 | -9 | -9 | -6 | 1 | 2 | 2 | -2 | -6 | -8 | -6 |
| 48 | 1 | 0 | -4 | -10 | -12 | -9 | -5 | 1 | 2 | 0 | -7 | -10 | -10 | -6 | 1 | 3 | 3 | -2 | -7 | -9 | -6 | 1 | 2 | 3 | 0 | -4 | -7 | -6 |
| 52 | 1 | 0 | -3 | -9 | -11 | -9 | -5 | 1 | 3 | 1 | -5 | -9 | -9 | -6 | 1 | 3 | 4 | -1 | -6 | -8 | -6 | 1 | 2 | 4 | 2 | -3 | -5 | -5 |
| 56 | 1 | 1 | -3 | -9 | -12 | -10 | -5 | 2 | 3 | 3 | -4 | -9 | -9 | -6 | 2 | 4 | 5 | 1 | -5 | -7 | -5 | 1 | 2 | 4 | 3 | -1 | -4 | -4 |
| 60 | 1 | 2 | -2 | -8 | -12 | -10 | -6 | 2 | 4 | 3 | -3 | -9 | -9 | -6 | 2 | 4 | 6 | 2 | -4 | -6 | -5 | 1 | 2 | 5 | 4 | 0 | -3 | -4 |
| 64 | 1 | 2 | -1 | -7 | -11 | -10 | -6 | 2 | 4 | 4 | -2 | -8 | -9 | -6 | 1 | 4 | 7 | 3 | -3 | -5 | -4 | 1 | 2 | 5 | 5 | 1 | -2 | -3 |
| 68 | 1 | 3 | 0 | -6 | -10 | -10 | -6 | 2 | 4 | 5 | -1 | -6 | -8 | -5 | 1 | 4 | 7 | 4 | -2 | -4 | -4 | 0 | 2 | 5 | 5 | 2 | -1 | -2 |
| 72 | 1 | 3 | 1 | -5 | -9 | -9 | -6 | 2 | 5 | 6 | 0 | -5 | -7 | -5 | 1 | 4 | 7 | 4 | 0 | -4 | -3 | 0 | 1 | 5 | 5 | 3 | 0 | -2 |
| 76 | 1 | 3 | 1 | -4 | -8 | -9 | -5 | 2 | 5 | 6 | 1 | -4 | -6 | -4 | 1 | 4 | 8 | 5 | 0 | -3 | -3 | 0 | 1 | 4 | 5 | 3 | 0 | -2 |
| 80 | 1 | 3 | 2 | -4 | -7 | -7 | -5 | 2 | 5 | 7 | 1 | -3 | -5 | -4 | 1 | 4 | 8 | 5 | 1 | -2 | -2 | 0 | 1 | 5 | 5 | 3 | 0 | -1 |

(DENSITY)/(ZONAL MEAN DENSITY) - 1 (%)

|  | LONGITUDE 60 E | | | | | | | LONGITUDE 90 E | | | | | | | LONGITUDE 120 E | | | | | | | LONGITUDE 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**SEPTEMBER**

| LAT | 60E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 36 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 40 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 44 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 48 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 52 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 56 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 60 | 0 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 64 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| 76 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 0 |
| 80 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0 | 0 |

**OCTOBER**

| LAT | 60E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | -2 | -2 | -1 | -1 | 1 | 1 | 0 | -2 | -2 | -1 | -1 |
| 20 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | -2 | -2 | -2 | -1 | 1 | 1 | 0 | -2 | -2 | -2 | -1 |
| 24 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 1 | 1 | 0 | -2 | -3 | -3 | -2 | 1 | 1 | 1 | -1 | -2 | -2 | -2 |
| 28 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | 0 | 0 | -1 | -3 | -4 | -4 | -2 | 0 | 0 | 0 | -2 | -3 | -3 | -2 | 1 | 1 | 1 | 0 | -1 | -1 | -1 |
| 32 | 0 | 0 | -1 | -3 | -4 | -4 | -2 | 0 | 0 | -1 | -3 | -4 | -5 | -2 | 0 | 0 | -1 | -2 | -3 | -2 | | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 36 | 0 | 0 | -1 | -2 | -4 | -4 | -2 | -1 | -1 | 0 | -1 | -3 | -3 | -2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 3 | 4 | 4 | 2 |
| 40 | 0 | 0 | 0 | -1 | -3 | -3 | -2 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | -1 | -1 | 1 | 3 | 4 | 4 | 3 | 0 | 0 | 1 | 5 | 8 | 8 | 5 |
| 44 | 0 | 0 | 1 | 1 | -1 | -2 | -1 | -1 | -1 | 1 | 3 | 4 | 3 | 2 | -1 | -1 | 2 | 5 | 8 | 8 | 5 | 0 | 0 | 1 | 6 | 10 | 11 | 6 |
| 48 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | -1 | 0 | 2 | 4 | 6 | 5 | 3 | -1 | -1 | 2 | 6 | 10 | 10 | 6 | 0 | -1 | 1 | | 11 | 12 | 7 |
| 52 | 0 | 0 | 2 | 3 | 2 | 1 | 1 | -1 | 0 | 2 | 5 | 7 | 7 | 4 | -1 | -1 | 2 | 6 | 11 | 11 | 6 | 0 | -1 | 1 | 6 | 11 | 12 | 7 |
| 56 | -1 | 0 | 2 | 4 | 4 | 3 | 1 | -1 | 0 | 2 | 6 | 9 | 9 | 5 | -1 | -1 | 2 | 7 | 12 | 13 | 7 | -1 | -1 | 1 | 6 | 11 | 12 | 7 |
| 60 | -1 | 0 | 3 | 5 | 5 | 4 | 2 | -1 | 0 | 3 | 7 | 10 | 10 | 5 | -1 | -1 | 2 | 8 | 12 | 13 | 7 | -1 | -1 | 1 | 6 | 12 | 11 | 7 |
| 64 | -1 | 0 | 3 | 5 | 6 | 4 | 2 | -1 | 0 | 3 | 7 | 10 | 9 | 5 | -1 | -1 | 2 | 7 | 11 | 12 | 6 | -1 | -1 | 1 | 5 | 9 | 10 | 6 |
| 68 | -1 | 1 | 3 | 6 | 6 | 4 | 2 | -1 | 0 | 3 | 7 | 9 | 8 | 4 | -1 | -1 | 2 | 6 | 10 | 10 | 6 | -1 | -1 | 0 | 4 | 8 | 9 | 6 |
| 72 | -1 | 1 | 3 | 5 | 6 | 3 | 2 | -1 | 0 | 2 | 6 | 9 | 7 | 4 | -1 | -1 | 1 | 5 | 9 | 9 | 6 | -1 | -1 | 0 | 3 | 7 | 8 | 6 |
| 76 | -1 | 1 | 3 | 5 | 5 | 2 | 2 | -1 | 0 | 2 | 5 | 8 | 5 | 4 | -1 | -1 | 1 | 4 | 8 | 7 | 5 | -1 | -1 | -1 | 2 | 4 | 7 | 5 |
| 80 | -1 | 0 | 2 | 4 | 5 | 1 | 2 | -1 | 0 | 1 | 4 | 7 | 4 | 3 | -1 | -1 | 0 | 4 | 7 | 6 | 5 | -1 | -1 | -1 | 2 | 4 | 4 | 4 |

**NOVEMBER**

| LAT | 60E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 1 | 0 | -2 | -3 | -2 | -1 | 0 | 2 | 1 | -2 | -4 | -4 | -2 | -1 | 2 | 2 | -1 | -3 | -3 | -2 | -1 |
| 20 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 1 | 0 | -2 | -3 | -3 | -2 | -1 | 2 | 1 | -2 | -4 | -4 | -3 | -1 | 2 | 2 | 0 | -3 | -3 | -2 | -1 |
| 24 | 0 | -1 | -2 | -2 | -2 | -2 | -1 | 1 | 0 | -2 | -4 | -5 | -4 | -2 | 1 | 1 | -1 | -4 | -5 | -4 | -2 | 1 | 2 | 0 | -2 | -3 | -2 | -1 |
| 28 | 0 | -1 | -2 | -4 | -6 | -6 | -4 | 0 | 0 | -2 | -4 | -7 | -7 | -5 | 0 | 0 | 0 | -2 | -5 | -5 | -3 | 1 | 1 | 1 | 1 | 0 | -1 | -1 |
| 32 | 0 | 0 | -2 | -5 | -9 | -10 | -6 | 0 | 0 | 0 | -4 | -8 | -9 | -6 | 0 | 0 | 1 | 0 | -3 | -5 | -3 | 0 | 0 | 4 | 7 | 8 | 4 | 3 |
| 36 | 0 | 1 | 0 | -5 | -10 | -11 | -7 | 0 | 0 | 1 | -2 | -7 | -9 | -6 | 0 | 0 | 3 | 3 | 0 | -2 | -2 | 0 | 0 | 4 | 7 | 8 | 4 | 3 |
| 40 | 1 | 1 | 1 | -4 | -10 | -11 | -7 | 0 | 1 | 3 | 0 | -4 | -6 | -4 | -1 | 1 | 4 | 6 | 4 | 1 | 0 | -1 | 0 | 4 | 9 | 11 | 9 | 5 |
| 44 | 1 | 2 | 2 | -3 | -8 | -9 | -6 | 0 | 2 | 4 | 2 | -2 | -4 | -3 | 0 | 1 | 4 | 7 | 6 | 4 | 2 | -1 | 0 | 3 | 9 | 13 | 12 | 6 |
| 48 | 1 | 3 | 2 | -2 | -7 | -8 | -5 | 0 | 2 | 4 | 3 | 0 | -2 | -2 | -1 | 1 | 4 | 7 | 7 | 5 | 3 | -1 | -1 | 3 | 8 | 13 | 12 | 7 |
| 52 | 1 | 3 | 3 | -1 | -6 | -7 | -4 | 0 | 2 | 4 | 3 | 1 | -1 | -1 | -1 | 0 | 3 | 7 | 8 | 6 | 3 | -2 | -1 | 2 | 8 | 13 | 12 | 7 |
| 56 | 2 | 3 | 4 | 1 | -4 | -6 | -3 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | -1 | 0 | 3 | 7 | 10 | 8 | 4 | -2 | -2 | 1 | 8 | 14 | 14 | 7 |
| 60 | 2 | 3 | 4 | 2 | -2 | -4 | -2 | 0 | 1 | 4 | 6 | 5 | 3 | 1 | -1 | -1 | 3 | 8 | 12 | 9 | 4 | -2 | -2 | 1 | 8 | 15 | 14 | 7 |
| 64 | 1 | 2 | 4 | 3 | 0 | -3 | -2 | 0 | 1 | 4 | 7 | 7 | 4 | 1 | -1 | -1 | 2 | 8 | 12 | 10 | 5 | -2 | -2 | 0 | 7 | 14 | 14 | 7 |
| 68 | 1 | 2 | 4 | 4 | 1 | -1 | -1 | 0 | 0 | 3 | 7 | 7 | 4 | 2 | 0 | -1 | 2 | 8 | 12 | 10 | 5 | -1 | -1 | 0 | 7 | 13 | 13 | 6 |
| 72 | 0 | 1 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 6 | 7 | 5 | 2 | 0 | -1 | 1 | 7 | 11 | 9 | 5 | 0 | -1 | 0 | 6 | 11 | 12 | 6 |
| 76 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | -1 | 1 | 5 | 7 | 4 | 2 | 0 | -1 | 1 | 6 | 10 | 9 | 4 | 0 | -1 | 0 | 5 | 10 | 10 | 5 |
| 80 | 0 | 0 | 2 | 3 | 2 | 1 | 0 | 0 | -1 | 1 | 4 | 6 | 4 | 2 | -1 | -1 | 0 | 5 | 8 | 7 | 4 | 0 | -1 | 0 | 4 | 8 | 9 | 5 |

**DECEMBER**

| LAT | 60E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 120E 20 | 30 | 40 | 50 | 60 | 70 | 80 | 150E 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -2 | -2 | 2 | 4 | 3 | 1 | 1 | -1 | -3 | -2 | 0 | 1 | 1 | 2 | 1 | -3 | -5 | -3 | 0 | 1 | 2 | 2 | -2 | -5 | -5 | -1 | 1 |
| 20 | 0 | -2 | -2 | 1 | 3 | 2 | 1 | 1 | -1 | -3 | -3 | -4 | -1 | 0 | 2 | 1 | -3 | -5 | -4 | -1 | 0 | 2 | 2 | -1 | -5 | -5 | -2 | 0 |
| 24 | 0 | -2 | -3 | -2 | -1 | -1 | -1 | 1 | -1 | -3 | -4 | -5 | -4 | -2 | 1 | 1 | -2 | -5 | -5 | -4 | -2 | 1 | 2 | 0 | -3 | -3 | -2 | -1 |
| 28 | 0 | -1 | -3 | -5 | -7 | -7 | -4 | 0 | 0 | -2 | -5 | -8 | -8 | -5 | 0 | 0 | -1 | -3 | -5 | -6 | -3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | -2 | -6 | -10 | -10 | -6 | 0 | 0 | -1 | -5 | -9 | -9 | -5 | 0 | 0 | 1 | -1 | -4 | -5 | -3 | 0 | 0 | 4 | 5 | 5 | 3 | 2 |
| 36 | 0 | 1 | 0 | -5 | -10 | -10 | -6 | 0 | 1 | 1 | -3 | -8 | -8 | -4 | 0 | 1 | 3 | 2 | -1 | -2 | -1 | 0 | 0 | 4 | 9 | 9 | 7 | 4 |
| 40 | 0 | 2 | 1 | -3 | -8 | -8 | -5 | 0 | 1 | 2 | 0 | -5 | -5 | -3 | 0 | 1 | 4 | 5 | 3 | 2 | 2 | -1 | 0 | 5 | 11 | 12 | 11 | 6 |
| 44 | 0 | 2 | 2 | 0 | -5 | -6 | -5 | 0 | 1 | 3 | 2 | -1 | -1 | -1 | 0 | 1 | 4 | 7 | 6 | 5 | 4 | -1 | 0 | 5 | 11 | 14 | 13 | 8 |
| 48 | 0 | 1 | 2 | 1 | -2 | -4 | -4 | 0 | 1 | 3 | 3 | 1 | 1 | 0 | 0 | 1 | 3 | 7 | 7 | 7 | 4 | 0 | 0 | 4 | 11 | 13 | 13 | 8 |
| 52 | 0 | 1 | 2 | 2 | -1 | -2 | -3 | 0 | 1 | 2 | 4 | 3 | 2 | 0 | 0 | 1 | 3 | 7 | 8 | 8 | 5 | 0 | 0 | 4 | 10 | 12 | 12 | 8 |
| 56 | 0 | 1 | 2 | 3 | -1 | -1 | -2 | 0 | 0 | 2 | 4 | 4 | 3 | 1 | -1 | 0 | 2 | 7 | 9 | 9 | 5 | -1 | -1 | 3 | 9 | 12 | 12 | 8 |
| 60 | 0 | 1 | 2 | 4 | 3 | 0 | -2 | 0 | 0 | 1 | 5 | 6 | 5 | 1 | -1 | 0 | 2 | 7 | 9 | 9 | 5 | -1 | -1 | 2 | 8 | 11 | 12 | 8 |
| 64 | 0 | 0 | 2 | 5 | 4 | 1 | -1 | -1 | -1 | 0 | 5 | 6 | 5 | 2 | -1 | -1 | 1 | 6 | 9 | 9 | 5 | -1 | -1 | 0 | 6 | 10 | 11 | 9 |
| 68 | 0 | -1 | 1 | 4 | 4 | 2 | -1 | -1 | -2 | -1 | 4 | 6 | 5 | 2 | -1 | -2 | 0 | 4 | 8 | 8 | 5 | 0 | -2 | -1 | 3 | 7 | 9 | 7 |
| 72 | -1 | -1 | 1 | 4 | 4 | 2 | -1 | -1 | -2 | -1 | 3 | 5 | 4 | 2 | -1 | -3 | -2 | 1 | 4 | 6 | 5 | 0 | -2 | -1 | 3 | 7 | 9 | 7 |
| 76 | -1 | -2 | 0 | 3 | 4 | 2 | -1 | -1 | -3 | -2 | 1 | 4 | 4 | 1 | -1 | -3 | -2 | 1 | 4 | 6 | 4 | 0 | -2 | -1 | 2 | 5 | 8 | 6 |
| 80 | -1 | -2 | 0 | 2 | 3 | 1 | -1 | -1 | -3 | -3 | 0 | 2 | 2 | 1 | -1 | -3 | -2 | 0 | 2 | 5 | 3 | 0 | -2 | -1 | 1 | 4 | 7 | 6 |

|  |  | LONGITUDE 180 DEG | | | | | | | LONGITUDE 150 W | | | | | | | LONGITUDE 120 W | | | | | | | LONGITUDE 90 W | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**JANUARY**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | -1 | -3 | -4 | -5 | -3 | 0 | 0 | 0 | -1 | -1 | -4 | -3 | 0 | 0 | 1 | 0 | -1 | -3 | -3 | 0 | 1 | 1 | 0 | -1 | -2 | -2 |
| 20 | 1 | 1 | -1 | -2 | -2 | -4 | -3 | 0 | 1 | 0 | 0 | 0 | -3 | -3 | 0 | 0 | 1 | 1 | 0 | -2 | -2 | 0 | 1 | 1 | 0 | -1 | -2 | -1 |
| 24 | 1 | 1 | 1 | 2 | 3 | 3 | 1 | 0 | 1 | 2 | 3 | 4 | 3 | 2 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | -2 | -1 | 0 |
| 28 | 1 | 2 | 3 | 6 | 11 | 12 | 7 | 0 | 1 | 3 | 6 | 11 | 11 | 7 | 0 | 1 | 2 | 3 | 4 | 5 | 4 | 0 | 0 | 0 | -1 | -3 | -2 | 0 |
| 32 | 0 | 2 | 5 | 11 | 18 | 19 | 11 | 0 | 1 | 4 | 9 | 15 | 17 | 10 | 0 | 0 | 1 | 3 | 4 | 6 | 5 | 0 | -1 | -1 | -3 | -5 | -4 | -1 |
| 36 | 0 | 1 | 6 | 14 | 22 | 23 | 12 | 0 | 1 | 3 | 9 | 17 | 18 | 11 | 0 | -1 | 0 | 1 | 3 | 6 | 5 | 0 | -1 | -3 | -5 | -7 | -6 | -2 |
| 40 | 0 | 1 | 5 | 14 | 23 | 23 | 13 | 0 | 0 | 2 | 8 | 15 | 17 | 10 | 0 | -2 | -2 | -1 | 1 | 4 | 4 | 0 | -2 | -4 | -7 | -9 | -7 | -3 |
| 44 | 0 | 0 | 3 | 11 | 20 | 21 | 12 | -1 | -1 | -1 | 4 | 11 | 14 | 9 | -1 | -2 | -4 | -4 | -1 | 1 | 2 | 0 | -2 | -5 | -8 | -9 | -8 | -4 |
| 48 | 0 | -1 | 1 | 8 | 16 | 18 | 12 | -1 | -2 | -3 | 1 | 8 | 10 | 7 | -1 | -3 | -5 | -5 | -3 | -1 | 1 | 0 | -2 | -5 | -8 | -10 | -9 | -5 |
| 52 | -1 | -1 | 0 | 5 | 13 | 15 | 10 | -1 | -3 | -4 | -1 | 5 | 7 | 6 | -1 | -3 | -6 | -7 | -5 | -3 | 0 | 0 | -1 | -5 | -8 | -10 | -9 | -6 |
| 56 | -1 | -2 | -2 | 3 | 10 | 12 | 9 | -1 | -3 | -5 | -3 | 2 | 5 | 5 | -1 | -3 | -7 | -8 | -6 | -4 | -1 | 0 | -1 | -5 | -9 | -10 | -9 | -6 |
| 60 | -1 | -2 | -2 | 2 | 8 | 10 | 8 | -1 | -4 | -6 | -5 | -1 | 3 | 5 | -1 | -3 | -7 | -9 | -7 | -4 | -1 | 0 | -1 | -5 | -8 | -10 | -9 | -6 |
| 64 | -1 | -2 | -2 | 0 | 5 | 7 | 7 | -1 | -4 | -5 | -6 | -2 | 2 | 4 | -1 | -3 | -6 | -9 | -7 | -4 | -1 | 0 | -1 | -4 | -7 | -8 | -7 | -5 |
| 68 | -1 | -2 | -2 | -1 | 3 | 6 | 5 | -1 | -3 | -5 | -5 | -2 | 2 | 3 | -1 | -3 | -6 | -7 | -6 | -3 | -1 | 0 | 0 | -4 | -5 | -6 | -6 | -4 |
| 72 | -1 | -2 | -2 | -1 | 2 | 5 | 4 | -1 | -3 | -4 | -5 | -2 | 2 | 2 | 0 | -2 | -5 | -6 | -4 | -2 | -1 | 1 | 0 | -3 | -4 | -4 | -4 | -3 |
| 76 | -1 | -2 | -2 | 0 | 2 | 5 | 4 | -1 | -3 | -4 | -4 | -1 | 3 | 2 | 0 | -2 | -5 | -5 | -3 | 0 | 0 | 1 | 0 | -3 | -3 | -2 | -2 | -2 |
| 80 | -1 | -2 | -2 | 0 | 3 | 5 | 4 | -1 | -2 | -4 | -2 | 0 | 3 | 2 | 0 | -1 | -4 | -3 | -1 | 1 | 0 | 1 | 0 | -3 | -2 | -1 | -1 | -1 |

**FEBRUARY**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 2 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 0 | 1 | 0 | -1 | -1 | -2 | 0 | 0 | 1 | 0 | -1 | -2 | -3 | -1 | 0 | 1 | -1 | -1 | -3 | -3 |
| 20 | 2 | 1 | 1 | 0 | -1 | -1 | 0 | 2 | 1 | 1 | 1 | 0 | -1 | -2 | 0 | 0 | 0 | 0 | 0 | -2 | -3 | -2 | 0 | 0 | -1 | 0 | -2 | -3 |
| 24 | 1 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 1 | 1 | 2 | 5 | 3 | 2 | 0 | 1 | 2 | 2 | 3 | 1 | 1 | 0 | 1 | 2 | 1 | -1 | -1 | 0 |
| 28 | 0 | 1 | 2 | 4 | 7 | 8 | 4 | 1 | 1 | 2 | 5 | 9 | 9 | 6 | 1 | 0 | 1 | 3 | 5 | 6 | 5 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 32 | 0 | 2 | 4 | 8 | 12 | 12 | 7 | 0 | 1 | 4 | 8 | 13 | 14 | 8 | 1 | 0 | 1 | 4 | 6 | 8 | 6 | 0 | -1 | -1 | -1 | 0 | 1 | 2 |
| 36 | 0 | 1 | 3 | 9 | 16 | 15 | 9 | 0 | 1 | 3 | 8 | 15 | 15 | 8 | 0 | 0 | 1 | 3 | 6 | 8 | 5 | 0 | -1 | -1 | -1 | -3 | 1 | 2 |
| 40 | 0 | 0 | 3 | 8 | 16 | 15 | 9 | 0 | 0 | 2 | 6 | 13 | 14 | 8 | 0 | 0 | 0 | 2 | 4 | 7 | 4 | 0 | -2 | -2 | -3 | 0 | 1 |  |
| 44 | 0 | 1 | 1 | 6 | 13 | 13 | 7 | 0 | 0 | 1 | 5 | 11 | 10 | 6 | -1 | 0 | 1 | 1 | 3 | 4 | 4 | 0 | -1 | -1 | -3 | -4 | -1 | 1 |
| 48 | 0 | 0 | 1 | 5 | 11 | 11 | 7 | 0 | 0 | 0 | 3 | 7 | 8 | 5 | 0 | -1 | -1 | 0 | 0 | 2 | 2 | 0 | -1 | -2 | -4 | -5 | -2 | 0 |
| 52 | 0 | 0 | -1 | 4 | 10 | 10 | 7 | 0 | 0 | -1 | 2 | 6 | 6 | 4 | 0 | -1 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | -5 | -6 | -4 | -1 |
| 56 | 0 | -1 | 0 | 4 | 8 | 8 | 6 | 0 | -1 | -1 | 1 | 4 | 4 | 3 | 0 | -1 | -2 | -2 | -2 | -1 | 1 | 0 | -1 | -3 | -5 | -7 | -5 | -1 |
| 60 | 0 | -1 | -1 | 3 | 7 | 6 | 6 | 0 | -1 | -2 | 1 | 2 | 2 | 3 | -1 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | -1 | -2 | -6 | -7 | -5 | -2 |
| 64 | 0 | -1 | -1 | 2 | 5 | 5 | 5 | 0 | -1 | -1 | 0 | 1 | 1 | 2 | 0 | -2 | -2 | -3 | -4 | -3 | 0 | 0 | -1 | -3 | -5 | -7 | -5 | -1 |
| 68 | 0 | -1 | -1 | 1 | 3 | 3 | 4 | 0 | 0 | -1 | 0 | 0 | 0 | 2 | 0 | -1 | -1 | -2 | -4 | -2 | 0 | -1 | -1 | -2 | -5 | -6 | -4 | -2 |
| 72 | 0 | 0 | -1 | 1 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 | 0 | -1 | -3 | -2 | 0 | 0 | -1 | -1 | -4 | -5 | -3 | -1 |
| 76 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | -1 | 1 | 0 | 0 | 0 | -1 | -3 | -1 | 0 | 0 | -1 | -2 | -3 | -3 | -1 | -1 |
| 80 | 0 | 0 | -1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | -1 | 0 | -2 | -3 | 0 | 0 |

**MARCH**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 1 | 1 | -1 | -2 | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | -1 | -3 | -3 | -1 |
| 20 | 1 | 1 | -1 | -1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | -1 | -3 | -2 | -1 |
| 24 | 1 | 1 | 1 | 1 | 3 | 4 | 3 | 0 | 1 | 2 | 3 | 4 | 5 | 4 | 0 | 1 | 2 | 2 | 2 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 28 | 1 | 1 | 2 | 4 | 7 | 8 | 6 | 1 | 1 | 3 | 5 | 8 | 9 | 6 | 0 | 1 | 2 | 4 | 6 | 7 | 5 | 0 | 0 | 1 | 2 | 3 | 3 | 2 |
| 32 | 0 | 1 | 3 | 7 | 11 | 12 | 7 | 0 | 1 | 3 | 7 | 12 | 13 | 8 | 0 | 1 | 2 | 5 | 9 | 10 | 7 | 0 | 0 | 0 | 2 | 4 | 5 | 3 |
| 36 | 0 | 1 | 3 | 8 | 12 | 13 | 8 | 0 | 1 | 2 | 7 | 13 | 14 | 9 | 0 | 0 | 1 | 5 | 9 | 10 | 7 | 0 | 0 | -1 | 1 | 4 | 5 | 4 |
| 40 | 0 | 0 | 2 | 7 | 12 | 12 | 8 | 0 | 0 | 1 | 6 | 11 | 13 | 9 | 0 | 0 | 0 | 3 | 7 | 9 | 7 | 0 | -1 | -1 | 0 | 2 | 3 | 3 |
| 44 | 0 | 0 | 1 | 5 | 9 | 10 | 6 | 0 | 0 | 0 | 4 | 9 | 10 | 7 | 0 | -1 | -1 | 1 | 5 | 6 | 5 | 0 | -1 | -2 | -2 | -1 | 1 | 2 |
| 48 | 0 | -1 | 0 | 3 | 7 | 8 | 5 | 0 | -1 | -1 | 2 | 6 | 7 | 5 | 0 | -1 | -2 | 0 | 2 | 4 | 3 | 0 | -1 | -3 | -3 | -3 | -1 | 0 |
| 52 | 0 | -1 | -1 | 2 | 6 | 7 | 4 | 0 | -1 | -1 | 1 | 4 | 5 | 4 | 0 | -1 | -2 | -2 | 0 | 2 | 2 | 0 | -1 | -3 | -4 | -4 | -3 | 0 |
| 56 | -1 | -1 | -1 | 1 | 5 | 5 | 3 | -1 | -1 | -2 | -1 | 2 | 4 | 3 | 0 | -1 | -3 | -3 | -1 | 0 | 1 | 0 | -1 | -3 | -5 | -5 | -4 | -1 |
| 60 | -1 | -1 | -2 | 0 | 3 | 3 | 2 | -1 | -2 | -2 | -2 | 0 | 2 | 2 | 0 | -2 | -3 | -4 | -3 | -1 | 1 | 0 | -1 | -3 | -5 | -5 | -4 | -1 |
| 64 | 0 | -1 | -2 | -1 | 0 | 1 | 1 | -1 | -2 | -3 | -3 | -2 | 0 | 1 | 0 | -2 | -3 | -4 | -4 | -2 | 0 | 0 | -1 | -3 | -5 | -5 | -4 | -1 |
| 68 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -2 | -3 | -3 | -3 | -1 | 0 | 0 | -2 | -3 | -4 | -3 | -2 | 0 | 0 | -1 | -3 | -4 | -4 | -3 | -1 |
| 72 | 0 | -1 | -3 | -3 | -3 | -2 | -1 | 0 | -1 | -3 | -3 | -3 | -2 | 0 | 0 | -1 | -2 | -3 | -3 | -2 | 0 | 0 | -1 | -2 | -3 | -2 | -2 | 0 |
| 76 | 0 | -1 | -3 | -3 | -3 | -2 | -2 | 0 | -1 | -3 | -3 | -3 | -2 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -2 | -1 | 0 |
| 80 | 0 | -1 | -3 | -3 | -3 | -3 | -2 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 0 | -1 | -2 | -2 | -1 | -1 | 1 | 0 | -1 | -1 | -1 | -1 | -1 | 1 |

**APRIL**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 |
| 20 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 |
| 24 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 |
| 28 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 32 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 3 | 3 | 2 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 36 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 3 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 40 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 44 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | 1 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 | 1 | 1 | 0 | -1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 64 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 68 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 76 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |  | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 80 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |  | 0 | 1 | 1 | 0 | 0 | 0 | 1 |

|          | LONGITUDE 60 W |||||||  LONGITUDE 30 W |||||||  LONGITUDE 0 DEG |||||||  LONGITUDE 30 E |||||||
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**JANUARY**

| KM | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 1 | 2 | 0 | -1 | 1 | 0 | -1 | 0 | 2 | 2 | 2 | 4 | 2 | -1 | -1 | 2 | 4 | 6 | 6 | 4 | -1 | -2 | 1 | 4 | 7 | 7 | 4 |
| 20 | 0 | 1 | 2 | 0 | -1 | 0 | 0 | -1 | 0 | 2 | 2 | 2 | 3 | 2 | -1 | -1 | 1 | 3 | 5 | 6 | 4 | -1 | -2 | 0 | 4 | 6 | 6 | 4 |
| 24 | 0 | 0 | 0 | -1 | -3 | -2 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 3 | 3 | 1 | -1 | -1 | -1 | 1 | 3 | 2 | 1 |
| 28 | 0 | -1 | -1 | -3 | -6 | -6 | -3 | 0 | -1 | -1 | -2 | -4 | -5 | -3 | 0 | -1 | -1 | -1 | -2 | -3 | -3 | 0 | -1 | -2 | -2 | -3 | -4 | -4 |
| 32 | 0 | -1 | -2 | -5 | -9 | -9 | -5 | 0 | -1 | -2 | -4 | -7 | -9 | -6 | 0 | 0 | -2 | -3 | -5 | -7 | -6 | 0 | 0 | -2 | -5 | -7 | -8 | -6 |
| 36 | 0 | -1 | -3 | -7 | -11 | -11 | -6 | 0 | 0 | -2 | -5 | -9 | -11 | -8 | 0 | 0 | -1 | -4 | -8 | -10 | -8 | 0 | 0 | -2 | -6 | -9 | -11 | -8 |
| 40 | 0 | -1 | -3 | -7 | -12 | -12 | -7 | 1 | 1 | -1 | -5 | -10 | -12 | -9 | 1 | 1 | 0 | -4 | -9 | -11 | -9 | 0 | 1 | -1 | -5 | -10 | -11 | -8 |
| 44 | 0 | 0 | -2 | -7 | -12 | -12 | -8 | 1 | 2 | 1 | -4 | -10 | -13 | -9 | 1 | 2 | 2 | -2 | -9 | -11 | -9 | 0 | 1 | 1 | -3 | -8 | -10 | -8 |
| 48 | 1 | 1 | -1 | -6 | -11 | -12 | -8 | 1 | 2 | 2 | -3 | -9 | -12 | -9 | 1 | 3 | 3 | -1 | -7 | -10 | -8 | 0 | 1 | 2 | -1 | -6 | -8 | -6 |
| 52 | 1 | 1 | -1 | -6 | -11 | -12 | -9 | 1 | 3 | 3 | -2 | -8 | -11 | -9 | 1 | 3 | 4 | 1 | -5 | -9 | -7 | 0 | 2 | 3 | 1 | -4 | -6 | -5 |
| 56 | 1 | 1 | 0 | -5 | -10 | -11 | -9 | 1 | 3 | 4 | 0 | -7 | -10 | -8 | 1 | 3 | 5 | 2 | -4 | -7 | -6 | 0 | 2 | 3 | 2 | -2 | -4 | -3 |
| 60 | 1 | 2 | 0 | -4 | -8 | -10 | -8 | 1 | 3 | 4 | 1 | -5 | -8 | -7 | 1 | 3 | 5 | 3 | -3 | -6 | -5 | 0 | 1 | 3 | 2 | -1 | -3 | -2 |
| 64 | 1 | 2 | 0 | -2 | -6 | -8 | -7 | 1 | 3 | 4 | 2 | -3 | -7 | -6 | 1 | 2 | 5 | 3 | -2 | -4 | -4 | 0 | 1 | 3 | 2 | -1 | -2 | -2 |
| 68 | 1 | 2 | 0 | -1 | -4 | -6 | -5 | 1 | 3 | 4 | 2 | -2 | -5 | -5 | 0 | 2 | 4 | 3 | -1 | -3 | -3 | 0 | 1 | 3 | 2 | -1 | -1 | -2 |
| 72 | 1 | 2 | 0 | 0 | -2 | -5 | -4 | 1 | 2 | 3 | 2 | -1 | -4 | -4 | 0 | 1 | 4 | 2 | -1 | -3 | -3 | 0 | 0 | 3 | 1 | -2 | -2 | -2 |
| 76 | 1 | 2 | 0 | 0 | -1 | -3 | -3 | 1 | 2 | 3 | 2 | -1 | -3 | -3 | 0 | 1 | 4 | 2 | -2 | -3 | -3 | 0 | 0 | 3 | 0 | -3 | -2 | -2 |
| 80 | 1 | 2 | 1 | 0 | -1 | -2 | -2 | 1 | 2 | 4 | 2 | -1 | -3 | -2 | 0 | 2 | 4 | 1 | -3 | -3 | -3 | 0 | 1 | 3 | 0 | -3 | -3 | -3 |

**FEBRUARY**

| KM | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | 0 | 1 | 0 | 0 | -2 | 0 | -1 | 0 | 1 | 2 | 1 | 1 | 3 | 0 | 0 | 2 | 4 | 2 | 4 | 4 | 0 | -1 | 1 | 3 | 3 | 5 | 2 |
| 20 | -2 | 0 | 1 | 0 | 0 | -2 | 0 | -1 | 0 | 2 | 2 | 1 | 1 | 3 | 0 | 0 | 2 | 4 | 2 | 4 | 4 | 0 | -1 | 1 | 3 | 3 | 4 | 2 |
| 24 | 0 | 0 | 1 | 1 | -2 | -1 | 0 | 0 | -1 | 0 | 1 | 0 | 1 | 0 | -1 | -1 | 0 | 2 | 3 | 2 | 1 | -1 | -1 | -1 | 1 | 1 | 3 | 1 |
| 28 | -1 | 0 | 0 | 0 | -2 | -2 | 0 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 1 | -1 | -1 | -3 | -1 | -1 | -1 | -1 | -1 | -3 | -3 |
| 32 | 0 | -1 | -2 | -3 | -3 | -3 | -1 | -1 | 0 | -1 | -2 | -2 | -4 | -3 | -1 | 0 | 0 | -1 | -3 | -4 | -4 | 0 | 0 | -1 | -3 | -6 | -6 | -5 |
| 36 | 0 | -1 | -2 | -4 | -6 | -4 | -1 | 0 | -1 | -2 | -4 | -4 | -5 | -3 | 0 | 0 | -2 | -3 | -3 | -6 | -5 | 0 | 0 | -1 | -4 | -6 | -9 | -7 |
| 40 | 0 | 0 | -3 | -4 | -6 | -5 | -1 | 0 | -1 | -2 | -5 | -6 | -6 | -4 | 0 | -1 | -1 | -4 | -6 | -8 | -6 | 0 | 0 | -1 | -4 | -7 | -9 | -8 |
| 44 | 0 | -1 | -2 | -5 | -7 | -5 | -2 | 0 | -1 | -3 | -6 | -8 | -7 | -5 | 0 | 0 | -2 | -4 | -6 | -8 | -7 | 0 | 1 | 0 | -3 | -6 | -9 | -8 |
| 48 | 0 | -1 | -2 | -6 | -8 | -6 | -2 | 0 | 0 | -2 | -6 | -8 | -8 | -5 | 0 | 0 | -1 | -3 | -6 | -8 | -7 | 0 | 1 | 1 | -1 | -5 | -8 | -7 |
| 52 | 0 | -1 | -2 | -6 | -8 | -7 | -3 | 0 | 0 | -2 | -6 | -8 | -8 | -5 | 0 | 1 | -1 | -3 | -6 | -8 | -6 | 0 | 1 | 2 | 0 | -4 | -6 | -6 |
| 56 | 0 | 0 | -2 | -7 | -9 | -7 | -3 | 0 | 1 | -1 | -6 | -8 | -8 | -4 | 0 | 1 | 1 | -3 | -5 | -7 | -6 | 0 | 1 | 2 | 0 | -3 | -5 | -6 |
| 60 | 0 | -1 | -3 | -7 | -8 | -7 | -3 | 1 | 0 | -2 | -6 | -7 | -7 | -4 | 1 | 1 | 1 | -3 | -4 | -6 | -5 | 0 | 2 | 2 | 1 | -1 | -3 | -5 |
| 64 | 0 | -1 | -3 | -6 | -7 | -5 | -2 | 0 | 0 | -2 | -5 | -5 | -5 | -3 | 0 | 1 | 0 | -2 | -2 | -4 | -4 | 1 | 2 | 2 | 2 | 1 | -2 | -4 |
| 68 | 0 | -2 | -3 | -5 | -5 | -4 | -2 | 0 | -1 | -3 | -4 | -3 | -3 | -2 | 1 | 1 | -1 | 0 | 0 | -2 | -3 | 1 | 2 | 2 | 3 | 2 | -1 | -3 |
| 72 | -1 | -2 | -3 | -4 | -4 | -2 | -1 | 0 | -1 | -3 | -3 | -1 | 0 | -1 | 0 | 0 | -1 | 0 | 2 | 0 | -2 | 1 | 2 | 2 | 3 | 3 | 0 | -3 |
| 76 | -1 | -2 | -3 | -3 | -1 | 0 | -1 | 0 | -1 | -2 | -2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | -1 | 1 | 2 | 3 | 3 | 3 | 1 | -2 |
| 80 | 0 | -2 | -2 | -3 | -1 | 2 | 1 | 0 | -2 | -3 | -1 | 2 | 3 | 1 | 0 | 0 | -1 | 2 | 5 | 2 | -1 | 0 | 2 | 2 | 3 | 3 | 0 | -2 |

**MARCH**

| KM | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | 0 | 0 | -1 | -3 | -2 | -1 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 4 | 6 | 5 | 2 | -1 | -1 | 2 | 6 | 7 | 5 | 2 |
| 20 | -1 | 0 | 0 | -1 | -2 | -2 | 0 | -1 | -1 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 4 | 5 | 4 | 2 | -1 | -1 | 1 | 5 | 6 | 4 | 1 |
| 24 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 2 | 3 | 1 | -1 | -1 | -1 | 0 | 2 | 2 | 0 | -2 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | -2 | 0 | -1 | -1 | -1 | -2 | -3 | -3 | 0 | -1 | -2 | -3 | -5 | -4 | -5 |
| 32 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -3 | -3 | 0 | 0 | -2 | -4 | -6 | -7 | -6 | 0 | -1 | -2 | -6 | -9 | -10 | -7 |
| 36 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -2 | -3 | -5 | -5 | -4 | 0 | 0 | -2 | -5 | -8 | -9 | -6 | 0 | 0 | -2 | -6 | -11 | -12 | -8 |
| 40 | 0 | -1 | -2 | -3 | -3 | -2 | -1 | 0 | 0 | -2 | -4 | -6 | -6 | -4 | 0 | 1 | -1 | -5 | -8 | -9 | -6 | 0 | 1 | -1 | -5 | -9 | -10 | -7 |
| 44 | 0 | -1 | -2 | -4 | -5 | -4 | -1 | 0 | 0 | -2 | -5 | -7 | -6 | -3 | 0 | 1 | 0 | -4 | -7 | -7 | -4 | 0 | 1 | 1 | -2 | -6 | -7 | -5 |
| 48 | 0 | -1 | -3 | -5 | -6 | -5 | -2 | 0 | 0 | -1 | -5 | -7 | -6 | -3 | 0 | 1 | 1 | -3 | -6 | -6 | -3 | 0 | 2 | 2 | 0 | -4 | -5 | -3 |
| 52 | 0 | 0 | 3 | -6 | -7 | -6 | -2 | 1 | 1 | -1 | -5 | -7 | -6 | -3 | 1 | 1 | 1 | -2 | -5 | -5 | -3 | 0 | 2 | 3 | 1 | -2 | -3 | -2 |
| 56 | 1 | 0 | -3 | -6 | -7 | -6 | -2 | 1 | 1 | -1 | -4 | -7 | -6 | -3 | 1 | 2 | 1 | -1 | -4 | -4 | -2 | 0 | 2 | 3 | 3 | 0 | -2 | -1 |
| 60 | 1 | 0 | -2 | -5 | -6 | -5 | -2 | 1 | 1 | -1 | -4 | -5 | -5 | -2 | 1 | 2 | 2 | 0 | -2 | -3 | -1 | 0 | 2 | 4 | 4 | 1 | 0 | 0 |
| 64 | 1 | 0 | -2 | -4 | -5 | -4 | -2 | 1 | 1 | 0 | -2 | -4 | -3 | -1 | 1 | 2 | 2 | 1 | -1 | -1 | 0 | 0 | 2 | 4 | 4 | 2 | 2 | 1 |
| 68 | 0 | 0 | -2 | -3 | -3 | -3 | -1 | 1 | 1 | 0 | -1 | -2 | -1 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 2 | 4 | 4 | 3 | 3 | 2 |
| 72 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 1 | 1 | 0 | -1 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 0 | 2 | 4 | 4 | 4 | 4 | 3 |
| 76 | 0 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 2 | 3 | 3 | 0 | 2 | 4 | 4 | 4 | 4 | 3 |
| 80 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 3 | 2 | 3 | 4 | 3 | 0 | 2 | 4 | 4 | 4 | 4 | 3 |

**APRIL**

| KM | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | 1 | 2 | 1 | 0 | -1 | -1 | -1 | 1 | 2 | 1 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 0 |
| 20 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 2 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 |
| 24 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 |
| 28 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| 32 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 |
| 36 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -2 | -1 |
| 40 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -2 | -2 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -1 |
| 44 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -2 | -1 | 0 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 |
| 48 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -2 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 |
| 52 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 1 | 0 | -1 | -1 |
| 56 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | -1 | 0 | 1 | 0 | 0 | -1 | -1 |
| 60 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 |
| 64 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 |
| 68 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 |
| 72 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | -1 | 0 | 0 | 0 | -1 | -1 |
| 76 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 |
| 80 | 0 | 0 | 0 | 1 | 0 | -1 | 0 | 0 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | -1 |

N HEMISPHERE                              (DENSITY)/(ZONAL MEAN DENSITY) - 1  (%)

|  |  | LONGITUDE 60 E | | | | | | | LONGITUDE 90 E | | | | | | | LONGITUDE 120 E | | | | | | | LONGITUDE 150 E | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**JANUARY**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -1 | 0 | 2 | 4 | 5 | 3 | 0 | -1 | -2 | -1 | -1 | 0 | 1 | 1 | 1 | -2 | -4 | -5 | -3 | -1 | 1 | 1 | -2 | -4 | -6 | -5 | -3 |
| 20 | -1 | -1 | -1 | 2 | 3 | 4 | 3 | 0 | -1 | -2 | -2 | -2 | -1 | 0 | 1 | 1 | -2 | -4 | -5 | -4 | -2 | 1 | 1 | -2 | -4 | -5 | -5 | -3 |
| 24 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -2 | -3 | -4 | -4 | -2 | 1 | 0 | -1 | -3 | -4 | -3 | -2 | 1 | 1 | 0 | -1 | -1 | 0 | 0 |
| 28 | 0 | -1 | -2 | -4 | -6 | -7 | -4 | 0 | 0 | -2 | -4 | -6 | -6 | -3 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 1 | 1 | 2 | 3 | 6 | 6 | 4 |
| 32 | 0 | -1 | -3 | -6 | -9 | -10 | -6 | 0 | 0 | -2 | -5 | -7 | -7 | -4 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 4 | 7 | 12 | 12 | 7 |
| 36 | 0 | 0 | -2 | -7 | -10 | -11 | -6 | 0 | 0 | -1 | -4 | -7 | -6 | -3 | 0 | 0 | 2 | 3 | 4 | 3 | 3 | 0 | 1 | 5 | 10 | 16 | 16 | 9 |
| 40 | 0 | 0 | -2 | -6 | -9 | -10 | -6 | 0 | 0 | -1 | -3 | -5 | -4 | -2 | 0 | 0 | 2 | 4 | 6 | 6 | 4 | 0 | 1 | 5 | 12 | 18 | 18 | 10 |
| 44 | 0 | 0 | 0 | -3 | -7 | -7 | -5 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 2 | 5 | 8 | 9 | 6 | 0 | 1 | 4 | 11 | 18 | 18 | 11 |
| 48 | 0 | 0 | 0 | -1 | -4 | -5 | -3 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 2 | 6 | 9 | 10 | 7 | 0 | 0 | 3 | 9 | 16 | 18 | 11 |
| 52 | 0 | 0 | 1 | 1 | -1 | -3 | -2 | 0 | 0 | 1 | 2 | 3 | 3 | 3 | 0 | 0 | 2 | 6 | 9 | 11 | 7 | 0 | 0 | 2 | 8 | 14 | 16 | 11 |
| 56 | 0 | 0 | 2 | 2 | 0 | -1 | 0 | 0 | 0 | 1 | 3 | 4 | 4 | 3 | 0 | 0 | 2 | 6 | 10 | 11 | 7 | 0 | 0 | 1 | 7 | 13 | 14 | 9 |
| 60 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 5 | 3 | 0 | 1 | 2 | 6 | 10 | 10 | 6 | 0 | 0 | 1 | 6 | 12 | 12 | 8 |
| 64 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 3 | 5 | 4 | 2 | 0 | 1 | 2 | 6 | 9 | 8 | 5 | 0 | 0 | 1 | 5 | 10 | 10 | 7 |
| 68 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 3 | 4 | 3 | 2 | 0 | 1 | 1 | 5 | 8 | 6 | 4 | 0 | 0 | 1 | 4 | 8 | 7 | 6 |
| 72 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 2 | 3 | 2 | 1 | 0 | 1 | 1 | 4 | 6 | 4 | 3 | -1 | -1 | 0 | 3 | 4 | 6 | 5 |
| 76 | 0 | 0 | 1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 1 | 3 | 5 | 3 | 3 | -1 | -1 | 0 | 3 | 5 | 5 | 4 |
| 80 | 0 | 0 | 1 | -1 | -2 | -3 | -2 | 0 | 0 | 0 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 3 | 4 | 2 | 2 | -1 | -1 | 0 | 2 | 5 | 4 | 4 |

**FEBRUARY**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | -1 | -1 | -1 | 1 | 2 | 3 | 0 | -1 | 0 | -2 | -3 | 0 | 0 | -1 | 0 | 0 | -2 | -4 | -2 | -2 | 0 | 2 | 1 | -1 | -3 | -3 | -2 | 1 |
| 20 | 0 | -1 | -2 | 0 | 2 | 2 | -1 | -1 | -1 | -3 | -3 | -1 | -1 | -1 | 0 | 0 | -2 | -4 | -3 | -2 | 0 | 1 | 1 | 0 | -3 | -3 | -2 | 1 |
| 24 | -1 | 0 | -1 | -1 | -2 | -2 | -1 | 0 | 0 | -1 | -3 | -5 | -4 | -2 | 1 | 0 | -1 | -3 | -5 | -3 | -2 | 1 | 0 | -1 | -2 | -2 | 0 | 0 |
| 28 | 1 | -1 | -2 | -4 | -6 | -7 | -4 | 1 | -1 | -2 | -5 | -9 | -8 | -4 | 0 | 0 | -1 | -3 | -6 | -4 | -2 | 0 | 1 | 1 | 1 | : | 3 | 1 |
| 32 | 1 | -1 | -2 | -5 | -9 | -9 | -6 | 1 | -1 | -3 | -6 | -9 | -9 | -5 | 0 | 0 | -1 | -3 | -4 | -4 | -2 | 0 | 1 | 2 | 3 | 5 | 4 | 3 |
| 36 | 0 | 0 | -1 | -5 | -10 | -11 | -8 | 0 | 0 | -1 | -4 | -10 | -9 | -5 | 0 | 0 | 1 | 0 | -3 | -2 | 0 | 0 | 1 | 2 | 5 | 8 | 7 | 5 |
| 40 | 0 | 0 | -1 | -4 | -8 | -9 | -7 | 0 | 1 | 0 | -2 | -6 | -7 | -4 | 0 | 1 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 3 | 7 | 10 | 9 | 7 |
| 44 | 0 | 0 | 1 | -1 | -5 | -8 | -6 | 0 | 0 | 2 | 1 | -3 | -3 | -1 | 0 | 0 | 2 | 3 | 3 | 3 | 3 | 1 | 0 | 1 | 6 | 9 | 10 | 7 |
| 48 | 0 | 0 | 2 | 1 | -3 | -5 | -5 | 0 | 0 | 2 | 2 | 0 | 0 | -1 | 0 | 0 | 2 | 4 | 6 | 6 | 4 | 0 | 0 | 1 | 5 | 11 | 10 | 7 |
| 52 | 0 | 1 | 3 | 2 | -1 | -3 | -4 | 0 | 0 | 3 | 4 | 3 | 2 | 0 | 0 | 0 | 2 | 4 | 7 | 7 | 5 | 0 | 0 | 0 | 5 | 10 | 10 | 8 |
| 56 | 0 | 1 | 2 | 3 | 1 | -1 | -3 | 0 | 0 | 2 | 4 | 4 | 4 | 1 | 0 | 0 | 2 | 5 | 8 | 8 | 5 | 0 | 0 | 1 | 5 | 9 | 9 | 7 |
| 60 | 0 | 2 | 4 | 4 | 2 | 0 | -3 | 0 | 1 | 4 | 5 | 5 | 3 | 1 | 0 | 0 | 2 | 5 | 7 | 8 | 5 | 0 | -1 | 0 | 5 | 8 | 9 | 7 |
| 64 | 1 | 2 | 4 | 4 | 3 | 1 | -2 | 0 | 1 | 3 | 5 | 4 | 4 | 1 | 0 | 1 | 2 | 4 | 5 | 6 | 5 | 0 | 0 | 0 | 3 | 6 | 7 | 6 |
| 68 | 0 | 2 | 4 | 4 | 2 | 1 | -2 | 0 | 1 | 4 | 4 | 3 | 3 | 0 | 0 | 0 | 1 | 3 | 3 | 4 | 4 | 0 | -1 | 0 | 2 | 4 | 5 | 5 |
| 72 | 1 | 2 | 4 | 4 | 2 | 0 | -2 | 0 | 1 | 3 | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 3 | 0 | -1 | -1 | 0 | 2 | 3 | 4 |
| 76 | 0 | 2 | 3 | 3 | 0 | -1 | -2 | 0 | 1 | 2 | 1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 0 | 0 | -1 | -1 | 1 | 1 | 3 |
| 80 | 0 | 2 | 4 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | -3 | -2 | -1 | 0 | -1 | 0 | -2 | -3 | -1 | 1 | 0 | -1 | -2 | -1 | -1 | 0 | 2 |

**MARCH**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 1 | 3 | 3 | 2 | 0 | 0 | 0 | -1 | -1 | -2 | -2 | -2 | 1 | 1 | -2 | -4 | -5 | -4 | -2 | 1 | 1 | -2 | -4 | -3 | -2 | -1 |
| 20 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | -1 | -1 | -3 | -3 | -2 | 1 | 1 | -2 | -4 | -5 | -4 | -2 | 1 | 1 | -2 | -4 | -3 | -2 | -1 |
| 24 | 0 | -1 | -1 | -1 | -2 | -4 | -3 | 0 | 0 | -2 | -3 | -5 | -6 | -3 | 1 | 0 | -2 | -4 | -5 | -4 | -2 | 1 | 1 | -1 | -2 | -1 | 0 | 1 |
| 28 | 0 | -1 | -2 | -5 | -8 | -8 | -6 | 0 | -1 | -2 | -5 | -8 | -8 | -4 | 0 | 0 | -1 | -3 | -4 | -4 | -1 | 0 | 1 | 1 | 1 | 2 | 3 | 3 |
| 32 | 0 | -1 | -2 | -7 | -11 | -12 | -7 | 0 | -1 | -2 | -5 | -9 | -9 | -5 | 0 | 0 | 0 | -1 | -3 | -3 | -1 | 0 | 1 | 2 | 3 | 5 | 5 | 4 |
| 36 | 0 | 0 | -2 | -6 | -11 | -12 | -8 | 0 | 0 | -1 | -4 | -8 | -9 | -5 | 0 | 0 | 1 | 0 | -2 | -2 | -1 | 0 | 0 | 2 | 5 | 7 | 6 | 4 |
| 40 | 0 | 0 | 0 | -4 | -8 | -10 | -7 | 0 | 0 | 0 | -2 | -5 | -7 | -5 | 0 | 0 | 1 | 2 | 1 | 0 | -1 | 0 | 0 | 2 | 5 | 7 | 7 | 4 |
| 44 | 0 | 1 | 2 | -1 | -4 | -6 | -5 | 0 | 0 | 1 | 1 | -2 | -3 | -3 | 0 | 0 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 1 | 4 | 7 | 6 | 3 |
| 48 | 0 | 1 | 3 | 1 | -1 | -3 | -3 | 0 | 1 | 2 | 3 | 1 | -1 | -2 | 0 | 0 | 1 | 3 | 4 | 2 | 0 | 0 | -1 | 0 | 3 | 6 | 6 | 3 |
| 52 | 0 | 1 | 3 | 4 | 1 | -1 | -2 | 0 | 1 | 3 | 4 | 3 | 1 | -1 | 0 | 0 | 1 | 4 | 5 | 3 | 1 | 0 | -1 | 0 | 3 | 6 | 4 | 3 |
| 56 | 0 | 1 | 4 | 5 | 3 | 1 | -1 | 0 | 0 | 3 | 5 | 4 | 2 | 0 | 0 | 0 | 1 | 4 | 5 | 4 | 1 | -1 | -1 | 0 | 2 | 4 | 4 | 1 |
| 60 | 0 | 2 | 4 | 6 | 4 | 2 | 0 | 0 | 0 | 3 | 6 | 5 | 3 | 0 | 0 | -1 | 1 | 4 | 5 | 4 | 0 | 0 | -1 | -1 | 1 | 2 | 2 | 0 |
| 64 | 0 | 2 | 4 | 5 | 3 | 1 | 0 | 0 | 1 | 3 | 5 | 5 | 3 | 0 | 0 | 0 | 1 | 3 | 4 | 2 | -1 | 0 | -1 | -1 | 0 | 0 | 0 | -1 |
| 68 | 0 | 2 | 4 | 6 | 5 | 4 | 1 | 0 | 1 | 3 | 5 | 5 | 2 | -1 | 0 | 0 | 1 | 2 | 3 | 1 | -2 | 0 | -1 | -2 | -1 | -1 | 0 | -1 |
| 72 | 0 | 2 | 4 | 5 | 3 | 3 | 1 | 0 | 1 | 3 | 4 | 4 | 1 | -1 | 0 | 0 | 0 | 1 | 1 | -1 | -3 | 0 | -1 | -2 | -1 | -1 | -2 | -3 |
| 76 | 0 | 1 | 4 | 4 | 4 | 3 | 1 | 0 | 1 | 2 | 3 | 2 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | -2 | -3 | 0 | -1 | -2 | -2 | -2 | -3 | -3 |
| 80 | 0 | 1 | 4 | 4 | 4 | 2 | 1 | 0 | 0 | 2 | 2 | 1 | -1 | -1 | -1 | 0 | -1 | 0 | -1 | -3 | -3 | -1 | -1 | -3 | -2 | -3 | -3 | -4 |

**APRIL**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | -2 | -2 | -2 | 0 | 1 | 1 | 0 | -3 | -3 | -2 | 0 | 1 | 1 | 0 | -2 | -3 | -1 | 0 |
| 20 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | -2 | -3 | -2 | -1 | 1 | 1 | 0 | -2 | -3 | -2 | 0 | 1 | 1 | 0 | -2 | -2 | -1 | 0 |
| 24 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -1 | 0 | 1 | 0 | -2 | -3 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 36 | 0 | 0 | -1 | -1 | -2 | -1 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 |
| 40 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 44 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 1 |
| 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 1 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 |
| 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 |
| 56 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | -1 | -1 | 0 | 1 | 1 |
| 60 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 0 | 1 |
| 64 | -1 | -1 | -1 | 0 | -1 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 68 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 72 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 76 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 80 | -1 | 0 | -1 | -1 | -1 | -1 | -1 | 0 | -1 | -1 | -2 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

# Appendix B

**Calculation of Monthly Mean Values**

## 1. Zonal Mean Values

The following formulae hold for latitude $\varphi$ in the range 80° S to 80° N and height $z$ (km) in the range 17.5 to 80 km.

Pressure scale height, $H_{ref}$ (km)

$$H_{ref}^{-1} = \sum_{n=1}^{9} \sum_{s=1}^{9} c_{ns} \, \xi^{s-1} \, \zeta^{n-1} \tag{B1}$$

where

$$\xi = \sin \varphi$$

$$\zeta = (z - 48.75)/31.25$$

and $c_{ns}$ (km$^{-1}$) are tabulated below.

Pressure, $p_{ref}$ (mb)

$$p_{ref} = \exp\left(-31.25 \sum_{n=0}^{9} \sum_{s=1}^{9} c_{ns} \, \xi^{s-1} \, \zeta^{n}/n\right) \tag{B2}$$

where $\zeta^{n}/n$ denotes unity for $n = 0$ and $c_{ns}$ (km$^{-1}$) are tabulated below.

Geostrophic W-E wind, $u$ (m s$^{-1}$)

$$u = (31.25/2\omega r_E) \, g \, H_{ref} \, (1 - \xi^2)^{1/2} \sum_{n=0}^{9} \sum_{s=2}^{9} c_{ns} \, (s-1) \, \xi^{s-3} \, \zeta^{n}/n \tag{B3}$$

where $\zeta^{n}/n$ denotes unity for $n = 0$, $c_{ns}$ (km$^{-1}$) are tabulated below and

$$\omega = 2\pi/86400 \qquad (s^{-1})$$

$$r_E = 6378 \qquad (km)$$

$H_{new}$ (km) is determined by Eq. (B1) and $g$ by Eq. (2).

## 2. Values at Longitude $\lambda$

Temperature

$$T(\lambda) = T_{ref} + T_1 \cos(\lambda - \lambda_{T1}) + T_2 \cos(2\lambda - \lambda_{T2}) \qquad \text{(B4)}$$

where $\lambda$ is longitude in degrees E. $T_1$, $T_2$ are the wave 1 and 2 amplitudes tabulated below in units of 0.1 K and $\lambda_{T1}$, $\lambda_{T2}$ are the wave 1 and 2 phase tabulated in degrees.

Pressure

$$p(\lambda)/p_{ref} = 1 + p_1 \cos(\lambda - \lambda_{p1}) + p_2 \cos(2\lambda - \lambda_{p2}) \qquad \text{(B5)}$$

$p_1$, $p_2$ are the wave 1 and 2 amplitudes of the relative pressure variation tabulated below in units of 0.1 percent and $\lambda_{p1}$, $\lambda_{p2}$ are the wave 1 and 2 phases.

Density

$$\rho(\lambda)/\rho_{ref} = 1 + \rho_1 \cos(\lambda - \lambda_{\rho 1}) + \rho_2 \cos(2\lambda - \lambda_{\rho 2}) \qquad \text{(B6)}$$

$\rho_1$, $\rho_2$ are the wave 1 and 2 amplitudes of the relative density variation tabulated in units of 0.1 percent and $\lambda_{\rho 1}$, $\lambda_{\rho 2}$ are the wave 1 and 2 phases.

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COEFFICIENTS (C01,...,C91),...,(C09,...,C99) IN RELATIONS FOR ATMOSPHERIC STRUCTURE
18 TO 80 KM ALTITUDE AND 80S TO 80N LATITUDE

JANUARY

```
C01...C91 =  0.00127237  0.12479098 -0.00915463  0.07048135  0.02833854 -0.03978434 -0.00920329  0.04349079 -0.00957413 -0.03011445
C02...C92 = -0.00039723 -0.00166199  0.00087437  0.01594097  0.00821546 -0.10152928 -0.03966024  0.21846749  0.03385427 -0.13176845
C03...C93 = -0.00643429 -0.00239059  0.05164913  0.14971590 -0.05549771 -0.47851939 -0.13644673  0.41422124  0.13346669 -0.09617235
C04...C94 =  0.01852822  0.01810185  0.00810712  0.10125133 -0.21279876 -0.55632576  0.42027294  0.52498325 -0.23046573 -0.11475379
C05..C95 =  0.01641865  0.02499576 -0.05114178 -0.18678209 -0.11082975  0.31246387  0.75341293  0.04323535 -0.51266842 -0.18722891
C06...C96 = -0.01571712 -0.00459104  0.00473976 -0.19876094  0.30579207  1.04915136 -0.65387143 -1.29764689  0.30770603  0.46293588
C07...C97 = -0.02406220 -0.03681126  0.00817792 -0.06659145  0.21226191  0.57582153 -0.94694294 -1.10818756  0.63471368  0.63391933
C08...C98 =  0.00974671 -0.00410393 -0.01892014  0.05404688 -0.08003740 -0.28698525  0.18811209  0.40709009 -0.05885742 -0.15914147
C09...C99 =  0.01707979  0.01428778 -0.01247656  0.07724107 -0.03135764 -0.32648934  0.27510467  0.54190661 -0.20313416 -0.30102121
```

FEBRUARY

```
C01...C91 =  0.00012894  0.12243592  0.00019499  0.10392697 -0.00023390 -0.15999674  0.01438984  0.20857649 -0.01396673 -0.10549475
C02...C92 = -0.00141229 -0.00347502  0.00037884  0.03881233  0.05914240 -0.11433258 -0.17111889  0.14078088  0.10951755 -0.06506121
C03...C93 = -0.00342489  0.01796781  0.00417379 -0.16759134  0.11065485  0.49434841 -0.74722423  0.23759515  0.38387265
C04...C94 =  0.01951205  0.01633231  0.01901042 -0.01555432 -0.44483856 -0.28830270  1.00791360  0.56659338 -0.56660753 -0.27358025
C05...C95 =  0.01903430 -0.03950688  0.08856051  0.87039480 -0.80421302 -2.62808290  1.86701597  3.19646671 -1.09506217 -1.38441837
C06...C96 = -0.01508991  0.00229450 -0.01977313 -0.08110399  0.51643227  0.79365021 -1.19544417 -1.56620985  0.62449026  0.80602944
C07...C97 = -0.02451486  0.05334016 -0.18536543 -1.40730240  1.27562950  4.14785061 -2.68802213 -4.79369699  1.52824944  1.99035178
C08...C98 =  0.00627710 -0.00964804 -0.02019190  0.03703240 -0.03555497 -0.34460804  0.17408385  0.80896456 -0.06913438 -0.45368033
C09...C99 =  0.01485877 -0.02734092  0.06447677  0.64379077 -0.48128394 -1.84626114  1.03658727  2.14012541 -0.59603967 -0.90328397
```

MARCH

```
C01...C91 = -0.00080776  0.12203323  0.00655305  0.11329748 -0.02425425 -0.19667329  0.05097343  0.25337050 -0.03378718 -0.12395027
C02...C92 = -0.00044088 -0.00205618  0.00137877  0.02947170  0.04663128 -0.05400213 -0.13292488  0.01977574  0.08215611  0.00188995
C03...C93 =  0.00561148  0.02590721 -0.03603813 -0.17785530  0.08847144  0.18775590 -0.16933858 -0.05338683  0.12887216 -0.00056084
C04...C94 =  0.00700481  0.01084017  0.01513183 -0.11818448 -0.36157045 -0.00454602  0.79785508  0.34192243 -0.43532107 -0.21167380
C05...C95 = -0.00908313 -0.07612779  0.14176449  0.66859006 -0.24083085 -0.16693069  0.34097601 -1.37681964 -0.22618051  0.98279385
C06...C96 = -0.00186864 -0.01228346 -0.02401127  0.14081859  0.38625071  0.29134477 -0.87198290 -1.05425764  0.46516088  0.59894216
C07...C97 =  0.01750279  0.10041130 -0.16408142 -0.81184440  0.00957324 -0.44833866  0.14918963  3.04579741 -0.04538030 -1.94630866
C08...C98 = -0.00299224  0.00396800  0.00335633 -0.03334290 -0.02735190 -0.31133125  0.11498604  0.79395949 -0.06147562 -0.43193203
C09...C99 = -0.00450531 -0.04265298  0.03171144  0.30162356  0.24110628  0.45371336 -0.45337627 -1.67835398  0.21067721  1.00332953
```

APRIL

```
C01...C91 = -0.00116622  0.12305961  0.00749649  0.10346649 -0.00536721 -0.14193682  0.01173039  0.16309242 -0.01537173 -0.08098430
C02...C92 = -0.00008343 -0.00011653  0.00917619  0.01072846 -0.04242022 -0.04587496  0.06479146  0.05922321 -0.03417442 -0.02473953
C03...C93 =  0.00896627  0.01782204 -0.05758997 -0.00811735 -0.03045798 -0.67339677  0.20949084  1.26934501 -0.09589677 -0.61370555
C04...C94 = -0.00257903 -0.00242060 -0.00412287 -0.11211923 -0.06989626  0.40864075  0.14600924 -0.53845237 -0.05368211  0.25265049
C05...C95 = -0.01926704 -0.05890041  0.18872877  0.00818086  0.11826776  2.99741188 -0.83000142 -6.00991786  0.49252130  3.07057144
C06...C96 = -0.00703594 -0.01683680  0.00013628  0.14807389  0.26379640 -0.28828273 -0.61225628  0.37187651  0.32439932 -0.21467979
C07...C97 =  0.04003606  0.09244453 -0.23367811  0.06376986 -0.41124255 -4.59633533  1.63317904  8.93835495 -0.97808261 -4.53644427
C08...C98 =  0.00308108  0.01723657  0.00359341 -0.02118246 -0.16261663 -0.19137674  0.42368779  0.27287682 -0.24801958 -0.08170430
C09...C99 = -0.01789149 -0.04597551  0.07424141 -0.05780825  0.35735914  2.21356777 -1.03111395 -4.15793362  0.59830937  2.07778070
```

MAY

```
C01...C91 = -0.00071913  0.12494165  0.00185339  0.08519050  0.03151923 -0.06618478 -0.03783072  0.05706879  0.00427655 -0.03345428
C02...C92 =  0.00026382  0.00204607  0.01036655  0.01093314 -0.08995171 -0.15337416  0.14935809  0.25318030 -0.07336078 -0.11492910
C03...C93 =  0.00191448 -0.00106845 -0.01395362  0.09090854 -0.22090545 -0.76210755  0.46213726  1.23933728 -0.20237507 -0.56262198
C04...C94 = -0.01557576 -0.03331493 -0.04288217 -0.08521011  0.35297362  1.20498591 -0.46908522 -1.98595693  0.19379546  0.93937313
C05...C95 =  0.01564324  0.02855988  0.05829613 -0.13241675  0.42734056  1.58553785 -0.92602014 -2.99748031  0.41280594  1.46121224
C06...C96 = -0.00128565  0.03779726  0.15207173  0.12169322 -0.50756570 -1.82348883  0.24950486  3.20025775  0.07174748 -1.58279850
C07...C97 = -0.00557294 -0.04581359 -0.15918181  0.04942364 -0.43036856 -1.17146542  1.13204534  2.36088006 -0.52724894 -1.12415710
C08...C98 =  0.00359743 -0.01122069 -0.11409346 -0.04040971  0.24427941  0.73022170  0.11600971 -1.40789059 -0.22646495  0.74463185
C09...C99 = -0.00096673  0.01865570  0.09780853 -0.00404587  0.21451462  0.32818353 -0.66992125 -0.59117133  0.34942693  0.22551370
```

JUNE

```
C01...C91 =  0.00003394  0.12628778 -0.00236408  0.08248728  0.04571378 -0.06194819 -0.04797169  0.04834259  0.00676956 -0.02623892
C02...C92 =  0.00173411  0.00261062 -0.00372617  0.02589862 -0.01514720 -0.19012890  0.03897617  0.24970922 -0.02563110 -0.09119496
C03...C93 = -0.00613848 -0.01133322  0.00980521  0.08274066 -0.10692758 -0.35229902  0.12771033  0.43696357 -0.01498052 -0.15380366
C04...C94 = -0.03241294 -0.03782454  0.05494111 -0.28955160  0.08433159  2.19716631 -0.27484072 -3.24955798  0.17454165  1.43963095
C05...C95 =  0.05788579  0.07390847 -0.11353503  0.11672472  0.09476942 -1.22329559  0.56824811  2.03987496 -0.53977620 -1.05598695
C06...C96 =  0.02279953  0.05062851 -0.02271090  0.51020604 -0.08177123 -4.07752555  0.11166930  6.46342031 -0.02333763 -3.02528585
C07...C97 = -0.07994139 -0.12714114  0.15747917 -0.55973097 -0.20345386  4.16803339 -0.83000562 -6.70304832  0.85182993  3.30871017
C08...C98 = -0.00965106 -0.02021606 -0.02345164 -0.24227751  0.01215134  2.02280383  0.20215194 -3.41130486 -0.18784095  1.67817099
C09...C99 =  0.03875462  0.06133862 -0.06650771  0.35511110  0.19452096 -2.55865461  0.12471461  4.20314990 -0.24961668 -2.10150334
```

COEFFICIENTS (C01,...,C91),...,(C09,...,C99) IN RELATIONS FOR ATMOSPHERIC STRUCTURE
18 TO 80 KM  ALTITUDE AND 80S TO 80N LATITUDE

JULY

```
C01...C91 =  0.00068405  0.12629061 -0.00545789  0.08996370  0.03783371 -0.11362433 -0.02530848  0.13161175 -0.00356399 -0.06468435
C02...C92 =  0.00147042  0.00351398 -0.00482753 -0.00321652 -0.02839202 -0.04640022  0.10565427  0.04141741 -0.07646837  0.00138766
C03...C93 = -0.00333133 -0.00538735  0.00790614  0.09787739  0.12919946 -0.26925988 -0.42029665  0.14749216  0.28501021  0.01893162
C04...C94 = -0.02060886 -0.02889072  0.04954986 -0.28533491  0.14515269  2.04823266 -0.62277838 -3.06734220  0.43719990  1.37965870
C05...C95 =  0.02441003  0.04641651 -0.03958093  0.18612668 -0.64580102 -1.64229322  2.14566198  2.87724243 -1.41869359 -1.48512727
C06...C96 =  0.00341157  0.03545812 -0.08401840  0.67987949  0.10753604 -4.80716727  0.36648628  7.72324484 -0.33401237 -3.67313550
C07...C97 = -0.02658502 -0.08977803  0.09338335 -0.94306815  0.40888905  5.80575766 -2.26803884 -9.00603488  1.72111773  4.30755449
C08...C98 = -0.00194137 -0.01331467  0.04874555 -0.38990518 -0.29106991  2.80747015  0.37485301 -4.78104624 -0.17248014  2.37701053
C09...C99 =  0.01521754  0.04462508 -0.07789543  0.64679590  0.16275124 -3.87183597  0.37393433  6.05070967 -0.45535470 -2.91410931
```

AUGUST

```
C01...C91 =  0.00020765  0.12452320 -0.00134307  0.11146175  0.00714600 -0.21385775  0.01914237  0.28624417 -0.02209042 -0.13931134
C02...C92 =  0.00256568  0.00498126 -0.00776941 -0.02832102 -0.04921367 -0.01446019  0.17173187  0.08277720 -0.11618672 -0.04675842
C03...C93 =  0.00013836  0.00978497 -0.01158929 -0.09768893  0.13830930  0.37607289 -0.39758915 -0.72157661  0.26737419  0.40964352
C04...C94 = -0.02534683 -0.03399716  0.06914031 -0.15437335  0.09276717  1.76427336 -0.61084692 -3.07141396  0.44217164  1.51633559
C05...C95 =  0.01889165  0.01728417  0.03915706  0.67961703 -0.50595455 -3.17897830  1.59331195  4.84051394 -1.07014118 -2.33654383
C06...C96 =  0.03255960  0.04189229 -0.18013238  0.59017307  0.42995584 -4.76603149 -0.03509835  8.35154233 -0.15181730 -4.21052924
C07...C97 = -0.04229458 -0.06149177  0.04605318 -1.45672636  0.11460743  7.37560095 -1.34407290 -11.10312409  1.11647306  5.25951808
C08...C98 = -0.02403269 -0.01221989  0.12813871 -0.43153783 -0.59475659  3.15477964  0.83461872 -5.70765729 -0.40311735  2.96690860
C09...C99 =  0.03397213  0.03252988 -0.09300808  0.85113063  0.37188544 -4.55222667 -0.15888443  7.12580943 -0.10832941 -3.46565950
```

SEPTEMBER

```
C01...C91 = -0.00075569  0.12359979  0.00458944  0.11774632 -0.01144687 -0.23152286  0.04098052  0.30691991 -0.03270018 -0.14848656
C02...C92 =  0.00221174  0.00234098 -0.00784847  0.00811140 -0.03568975 -0.16395437  0.11941562  0.31108658 -0.07749447 -0.15736131
C03...C93 =  0.00361728  0.01466323 -0.02809760 -0.19812279  0.07948482  0.60683855 -0.24605349 -0.88056654  0.20033264  0.44298080
C04...C94 = -0.01736203 -0.01379260  0.06314463 -0.23496071  0.08405606  1.93101178 -0.41559946 -3.32330764  0.27591079  1.63886637
C05...C95 =  0.01537040 -0.01589307  0.00554711  0.98118687 -0.01138370 -3.44366645  0.61528981  4.60747389 -0.58557994 -2.08984293
C06...C96 =  0.02276015  0.00394905 -0.14278923  0.66355643  0.30546128 -4.42813563 -0.24088508  7.61313508  0.06529357 -3.81646203
C07...C97 = -0.03577625  0.01509790  0.15601354 -1.71582088 -0.67904311  6.60456783  0.15425224 -9.26964086  0.33427501  4.28906509
C08...C98 = -0.01202828  0.01309453  0.08002234 -0.44255428 -0.41249016  2.71271623  0.77514264 -4.80358057 -0.42245054  2.47771972
C09...C99 =  0.02795766 -0.01248964 -0.15404241  0.89693706  0.73791074 -3.70439902 -0.81765939  5.58520129  0.23383764 -2.70431448
```

OCTOBER

```
C01...C91 = -0.00117721  0.12371570  0.00612866  0.10517210  0.00328889 -0.15608968  0.00177648  0.18149246 -0.01216867 -0.08807129
C02...C92 =  0.00106321  0.00069037 -0.00821925  0.00369138  0.03969840 -0.04660451 -0.07622933  0.08538047  0.04359825 -0.04456247
C03...C93 =  0.00359981  0.01091406 -0.04108576 -0.06430606 -0.06175042 -0.30733534  0.17960621  0.74542642 -0.05177251 -0.38545599
C04...C94 = -0.00115689  0.00046894  0.00987406 -0.04342122  0.03640101  0.47008279 -0.02201637 -0.88597004 -0.02325247  0.45332568
C05...C95 =  0.02216339 -0.02955054  0.06496234  0.50748692  0.19492301  0.38732229 -0.38370863 -2.33363523  0.08627280  1.44830073
C06...C96 =  0.00421558  0.00044696  0.02039282  0.10906787 -0.12634274 -1.02157725  0.00081266  1.99280764  0.08772014 -1.05438475
C07...C97 = -0.04360555  0.05853845  0.00955413 -0.97833690 -0.52572345  0.36337118  0.80615382  1.97495592 -0.25205841 -1.43155635
C08...C98 =  0.00188648  0.00538463 -0.05290244 -0.04127226  0.09139104  0.48495008  0.14960018 -1.12282742 -0.17089879  0.64373551
C09...C99 =  0.02974920 -0.03764140 -0.05459910  0.51614131  0.44471354 -0.42818183 -0.71608330 -0.36245723  0.29981974  0.34288745
```

NOVEMBER

```
C01...C91 = -0.00045792  0.12490474  0.00416000  0.07798037  0.01008040 -0.04595763 -0.01021537  0.03636497 -0.00659265 -0.02646892
C02...C92 =  0.00023970  0.00007981 -0.00585225 -0.01381715  0.05561071  0.07922198 -0.10889304 -0.11044078  0.05902930  0.04241012
C03...C93 = -0.00109790 -0.00546995 -0.01100533  0.12190036 -0.13173108 -0.81497467  0.22427437  1.33396152 -0.05947632 -0.62221597
C04...C94 =  0.01548179  0.01993548  0.01073245  0.12186698 -0.16303467 -0.74647684  0.29836018  0.95496756 -0.15726041 -0.37165179
C05...C95 =  0.03288795  0.02325956  0.04374030 -0.17105516  0.02538992  2.32350627  0.07981737 -4.62526030 -0.16066731  2.38117870
C06...C96 = -0.00606262 -0.02072850 -0.05750418 -0.19087622  0.24597122  0.99741539 -0.30479578 -1.15505250  0.10899658  0.39946522
C07...C97 = -0.05111255 -0.01910766 -0.10370625  0.02375302  0.36504533 -2.78681604 -0.85557964  6.05301460  0.58942536 -3.20304983
C08...C98 =  0.00252644  0.00623749  0.03717285  0.12089724 -0.14389324 -0.43328008  0.15203854  0.38452610 -0.04044389 -0.09230989
C09...C99 =  0.02811085  0.00022410  0.05195174  0.05319892 -0.25364223  1.18698300  0.56949818 -2.69598744 -0.36392450  1.43807076
```

DECEMBER

```
C01...C91 =  0.00075466  0.12578014 -0.00435548  0.05794363  0.02368823  0.01984643 -0.01043594 -0.04148573 -0.01025555  0.00651621
C02...C92 =  0.00015047 -0.00032158 -0.00375648 -0.02540821  0.01103472  0.08064846 -0.00849910 -0.03450610  0.00513241 -0.02210814
C03...C93 = -0.00987577 -0.01544424  0.04450492  0.15253009 -0.15622745 -0.49683599  0.10605069  0.59307493  0.01734937 -0.21956086
C04...C94 =  0.01488091  0.01939306  0.07785008  0.25924726 -0.31786116 -1.18189202  0.27708944  1.27490402 -0.06846503 -0.40307220
C05...C95 =  0.04044434  0.06324335 -0.02670680 -0.12990971  0.05441467  0.19368543  0.19675434 -0.31331723 -0.20639747  0.10402293
C06...C96 =  0.00303609 -0.00755590 -0.24360088 -0.39184220  0.84801884  1.59456518 -0.73261431 -1.68283805  0.13668274  0.51857252
C07...C97 = -0.04234176 -0.07677294 -0.15203879 -0.08034543  0.49006617  0.34755356 -0.78494512 -0.16384530  0.43006615  0.07517913
C08...C98 = -0.00272279 -0.00474724  0.16273080  0.16506265 -0.56633854 -0.47712988  0.48158071  0.37340178 -0.07723910 -0.06142895
C09...C99 =  0.01834557  0.02680159  0.12462206  0.07507210 -0.40300002 -0.07886915  0.50095854 -0.12130732 -0.22596197  0.06107717
```

S HEMISPHERE                   AMPLITUDE (0.1K) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF TEMPERATURE

WAVE 1 AMPLITUDE (0.1K), WAVE 1 PHASE (DEGREES), WAVE 2 AMPLITUDE (0.1K), WAVE 2 PHASE (DEGREES) — KM LAT= -80 -70 -60 -50 -40 -30 -20

### APRIL

| KM | \| | W1 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W1 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 15 | 16 | 12 | 11 | 5 | 2 | 1 | | 184 | 167 | 122 | 92 | 95 | 155 | 260 | | 1 | 2 | 2 | 1 | 0 | 1 | 1 | | 12 | 78 | 118 | 121 | 251 | 103 | 107 |
| 20 | | 18 | 19 | 15 | 14 | 6 | 1 | 1 | | 181 | 162 | 112 | 82 | 79 | 152 | 276 | | 1 | 3 | 3 | 0 | 1 | 1 | 1 | | 16 | 74 | 115 | 110 | 272 | 104 | 112 |
| 24 | | 16 | 18 | 22 | 21 | 9 | 1 | 2 | | 164 | 133 | 86 | 62 | 45 | 344 | 277 | | 1 | 3 | 2 | 1 | 2 | 0 | 2 | | 30 | 66 | 104 | 342 | 295 | 97 | 116 |
| 28 | | 8 | 18 | 30 | 28 | 14 | 4 | 3 | | 103 | 77 | 59 | 43 | 23 | 336 | 269 | | 1 | 2 | 1 | 2 | 2 | 0 | 1 | | 62 | 28 | 54 | 328 | 310 | 326 | 125 |
| 32 | | 15 | 29 | 38 | 34 | 18 | 6 | 3 | | 39 | 39 | 37 | 25 | 8 | 332 | 265 | | 1 | 3 | 3 | 4 | 3 | 1 | 1 | | 166 | 332 | 327 | 322 | 319 | 306 | 159 |
| 36 | | 24 | 38 | 38 | 32 | 18 | 7 | 4 | | 23 | 23 | 21 | 10 | 356 | 328 | 261 | | 2 | 4 | 5 | 4 | 4 | 2 | 1 | | 205 | 302 | 312 | 318 | 325 | 305 | 245 |
| 40 | | 23 | 34 | 32 | 25 | 14 | 6 | 4 | | 24 | 18 | 7 | 353 | 342 | 319 | 253 | | 2 | 4 | 5 | 4 | 4 | 2 | 1 | | 213 | 286 | 305 | 316 | 333 | 311 | 271 |
| 44 | | 19 | 24 | 22 | 15 | 7 | 3 | 3 | | 41 | 30 | 11 | 353 | 342 | 327 | 239 | | 1 | 3 | 3 | 2 | 2 | 2 | 1 | | 196 | 247 | 275 | 280 | 328 | 293 | 272 |
| 48 | | 18 | 24 | 22 | 14 | 4 | 2 | 3 | | 49 | 31 | 11 | 1 | 355 | 331 | 230 | | 2 | 2 | 1 | 2 | 1 | 1 | 2 | | 171 | 236 | 188 | 214 | 147 | 244 | 267 |
| 52 | | 20 | 28 | 29 | 17 | 6 | 4 | 4 | | 41 | 18 | 357 | 350 | 336 | 290 | 241 | | 4 | 1 | 2 | 3 | 3 | 2 | 2 | | 180 | 264 | 122 | 151 | 126 | 225 | 272 |
| 56 | | 18 | 28 | 33 | 22 | 11 | 7 | 6 | | 22 | 356 | 337 | 328 | 307 | 274 | 258 | | 5 | 2 | 3 | 5 | 5 | 0 | 3 | | 194 | 26 | 80 | 95 | 109 | 216 | 284 |
| 60 | | 16 | 26 | 32 | 25 | 14 | 9 | 6 | | 357 | 334 | 321 | 306 | 280 | 256 | 263 | | 6 | 5 | 4 | 6 | 6 | 2 | 3 | | 201 | 31 | 25 | 64 | 87 | 32 | 300 |
| 64 | | 15 | 25 | 27 | 24 | 16 | 8 | 5 | | 332 | 318 | 308 | 290 | 266 | 244 | 251 | | 5 | 6 | 5 | 7 | 5 | 4 | 3 | | 199 | 34 | 8 | 54 | 60 | 33 | 315 |
| 68 | | 16 | 22 | 21 | 19 | 14 | 7 | 4 | | 306 | 299 | 293 | 276 | 256 | 236 | 215 | | 4 | 6 | 5 | 6 | 5 | 5 | 2 | | 190 | 40 | 1 | 49 | 55 | 38 | 335 |
| 72 | | 18 | 20 | 15 | 14 | 11 | 5 | 5 | | 285 | 279 | 274 | 261 | 243 | 222 | 172 | | 3 | 6 | 5 | 4 | 3 | 4 | 2 | | 173 | 47 | 360 | 46 | 43 | 46 | 359 |
| 76 | | 21 | 20 | 11 | 11 | 8 | 3 | 7 | | 273 | 262 | 253 | 245 | 229 | 205 | 157 | | 2 | 5 | 5 | 3 | 3 | 3 | 2 | | 144 | 54 | 3 | 44 | 29 | 57 | 32 |
| 80 | | 23 | 20 | 10 | 8 | 7 | 2 | 8 | | 269 | 257 | 226 | 229 | 215 | 177 | 150 | | 2 | 5 | 5 | 2 | 2 | 3 | 2 | | 127 | 57 | 4 | 43 | 15 | 67 | 51 |

### MAY

| KM | \| | W1 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W1 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 18 | 28 | 31 | 21 | 11 | 2 | 3 | | 187 | 158 | 139 | 126 | 111 | 62 | 269 | | 2 | 1 | 3 | 4 | 3 | 2 | 1 | | 308 | 3 | 48 | 53 | 12 | 310 | 290 |
| 20 | | 22 | 35 | 38 | 26 | 12 | 3 | 4 | | 182 | 153 | 136 | 124 | 106 | 36 | 286 | | 2 | 2 | 4 | 5 | 4 | 3 | 1 | | 308 | 349 | 39 | 46 | 3 | 302 | 271 |
| 24 | | 17 | 37 | 45 | 30 | 13 | 6 | 7 | | 158 | 139 | 128 | 116 | 91 | 2 | 308 | | 4 | 7 | 6 | 5 | 4 | 4 | 2 | | 314 | 336 | 8 | 16 | 337 | 287 | 252 |
| 28 | | 13 | 24 | 36 | 27 | 11 | 10 | 10 | | 85 | 100 | 111 | 100 | 60 | 349 | 323 | | 3 | 9 | 8 | 6 | 5 | 5 | 3 | | 310 | 328 | 336 | 328 | 299 | 270 | 237 |
| 32 | | 20 | 25 | 23 | 20 | 13 | 13 | 12 | | 55 | 44 | 56 | 59 | 16 | 342 | 333 | | 2 | 9 | 10 | 10 | 8 | 6 | 3 | | 297 | 321 | 310 | 293 | 265 | 251 | 229 |
| 36 | | 23 | 33 | 34 | 23 | 16 | 13 | 12 | | 43 | 16 | 2 | 3 | 348 | 339 | 342 | | 1 | 6 | 9 | 12 | 10 | 7 | 4 | | 272 | 314 | 294 | 272 | 244 | 233 | 221 |
| 40 | | 18 | 31 | 39 | 28 | 16 | 10 | 9 | | 38 | 7 | 350 | 342 | 332 | 339 | 351 | | 1 | 3 | 5 | 10 | 11 | 7 | 4 | | 252 | 316 | 282 | 253 | 227 | 218 | 214 |
| 44 | | 14 | 26 | 33 | 25 | 13 | 8 | 7 | | 39 | 9 | 354 | 346 | 338 | 357 | 6 | | 1 | 1 | 1 | 5 | 8 | 6 | 3 | | 240 | 348 | 232 | 221 | 212 | 200 | 213 |
| 48 | | 16 | 25 | 31 | 24 | 12 | 8 | 5 | | 52 | 18 | 359 | 347 | 340 | 12 | 26 | | 2 | 0 | 0 | 3 | 5 | 6 | 3 | | 215 | 323 | 37 | 187 | 202 | 205 | 219 |
| 52 | | 19 | 29 | 32 | 25 | 12 | 4 | 2 | | 54 | 25 | 357 | 335 | 319 | 8 | 103 | | 2 | 1 | 3 | 0 | 3 | 4 | 3 | | 185 | 257 | 325 | 349 | 183 | 192 | 211 |
| 56 | | 17 | 26 | 31 | 28 | 14 | 6 | 6 | | 51 | 18 | 344 | 318 | 289 | 214 | 180 | | 1 | 1 | 4 | 2 | 2 | 3 | 4 | | 146 | 225 | 314 | 345 | 142 | 149 | 184 |
| 60 | | 12 | 20 | 27 | 26 | 14 | 15 | 10 | | 46 | 10 | 328 | 303 | 262 | 199 | 185 | | 1 | 1 | 5 | 3 | 4 | 4 | 4 | | 115 | 214 | 314 | 337 | 144 | 116 | 157 |
| 64 | | 5 | 13 | 22 | 22 | 13 | 17 | 11 | | 17 | 347 | 310 | 286 | 241 | 196 | 183 | | 1 | 1 | 5 | 2 | 4 | 4 | 4 | | 84 | 201 | 324 | 333 | 147 | 105 | 142 |
| 68 | | 6 | 11 | 18 | 17 | 13 | 15 | 9 | | 282 | 292 | 281 | 263 | 224 | 193 | 173 | | 1 | 0 | 4 | 2 | 2 | 2 | 3 | | 51 | 161 | 341 | 327 | 151 | 85 | 136 |
| 72 | | 13 | 17 | 19 | 15 | 12 | 10 | 7 | | 259 | 255 | 250 | 232 | 206 | 188 | 149 | | 2 | 1 | 4 | 2 | 1 | 2 | 0 | | 22 | 77 | 7 | 327 | 163 | 350 | 359 |
| 76 | | 20 | 24 | 23 | 17 | 12 | 5 | 6 | | 254 | 243 | 229 | 206 | 192 | 178 | 123 | | 2 | 1 | 4 | 1 | 1 | 4 | 2 | | 5 | 54 | 29 | 342 | 314 | 312 | 311 |
| 80 | | 22 | 28 | 27 | 19 | 12 | 2 | 7 | | 250 | 238 | 217 | 192 | 184 | 136 | 104 | | 2 | 2 | 5 | 1 | 2 | 5 | 4 | | 358 | 44 | 50 | 5 | 326 | 305 | 307 |

### JUNE

| KM | \| | W1 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W1 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 13 | 18 | 20 | 15 | 10 | 1 | 5 | | 210 | 182 | 152 | 138 | 137 | 173 | 274 | | 3 | 2 | 4 | 5 | 6 | 6 | 3 | | 344 | 75 | 147 | 192 | 241 | 260 | 271 |
| 20 | | 15 | 21 | 24 | 17 | 11 | 1 | 7 | | 204 | 174 | 148 | 133 | 130 | 331 | 281 | | 5 | 3 | 5 | 6 | 7 | 7 | 3 | | 346 | 62 | 141 | 190 | 243 | 263 | 279 |
| 24 | | 7 | 17 | 22 | 16 | 8 | 5 | 8 | | 161 | 138 | 122 | 112 | 93 | 341 | 290 | | 5 | 5 | 5 | 5 | 5 | 5 | 2 | | 357 | 38 | 124 | 182 | 252 | 281 | 313 |
| 28 | | 13 | 17 | 16 | 14 | 12 | 10 | 7 | | 52 | 59 | 63 | 54 | 25 | 341 | 300 | | 1 | 5 | 4 | 2 | 3 | 4 | 3 | | 48 | 18 | 69 | 110 | 359 | 355 | 12 |
| 32 | | 15 | 23 | 28 | 26 | 22 | 13 | 6 | | 38 | 29 | 13 | 5 | 356 | 338 | 316 | | 2 | 4 | 6 | 7 | 10 | 9 | 5 | | 165 | 3 | 21 | 37 | 39 | 34 | 36 |
| 36 | | 13 | 23 | 34 | 34 | 26 | 12 | 3 | | 24 | 14 | 359 | 347 | 341 | 333 | 340 | | 2 | 3 | 4 | 11 | 15 | 12 | 6 | | 176 | 352 | 3 | 24 | 43 | 43 | 44 |
| 40 | | 13 | 22 | 31 | 29 | 20 | 7 | 2 | | 27 | 14 | 358 | 338 | 321 | 313 | 66 | | 1 | 2 | 5 | 9 | 14 | 11 | 5 | | 263 | 351 | 354 | 19 | 42 | 44 | 45 |
| 44 | | 15 | 26 | 30 | 22 | 13 | 3 | 2 | | 24 | 14 | 2 | 335 | 300 | 277 | 93 | | 3 | 2 | 4 | 3 | 6 | 5 | 3 | | 264 | 339 | 346 | 13 | 79 | 67 | 71 |
| 48 | | 17 | 31 | 33 | 22 | 11 | 5 | 3 | | 12 | 10 | 358 | 333 | 281 | 221 | 123 | | 4 | 2 | 2 | 1 | 7 | 5 | 3 | | 233 | 314 | 349 | 158 | 135 | 123 | 117 |
| 52 | | 19 | 35 | 37 | 25 | 11 | 12 | 9 | | 357 | 4 | 349 | 329 | 260 | 195 | 154 | | 6 | 2 | 1 | 2 | 9 | 6 | 4 | | 211 | 248 | 9 | 153 | 153 | 123 | 99 |
| 56 | | 18 | 32 | 32 | 22 | 14 | 23 | 20 | | 341 | 354 | 338 | 318 | 238 | 184 | 160 | | 6 | 2 | 1 | 1 | 6 | 7 | 5 | | 198 | 214 | 50 | 103 | 162 | 91 | 66 |
| 60 | | 17 | 26 | 25 | 17 | 18 | 31 | 27 | | 328 | 343 | 323 | 302 | 217 | 178 | 160 | | 5 | 2 | 1 | 2 | 1 | 7 | 5 | | 187 | 196 | 88 | 35 | 312 | 45 | 33 |
| 64 | | 13 | 20 | 20 | 14 | 17 | 31 | 28 | | 313 | 326 | 304 | 285 | 210 | 174 | 160 | | 3 | 2 | 1 | 4 | 6 | 8 | 4 | | 165 | 161 | 71 | 29 | 348 | 16 | 359 |
| 68 | | 10 | 14 | 16 | 12 | 13 | 24 | 20 | | 289 | 295 | 282 | 270 | 206 | 169 | 160 | | 2 | 2 | 3 | 5 | 9 | 9 | 4 | | 81 | 99 | 52 | 31 | 355 | 355 | 323 |
| 72 | | 9 | 15 | 15 | 10 | 7 | 13 | 6 | | 255 | 256 | 257 | 259 | 199 | 156 | 155 | | 4 | 4 | 4 | 6 | 11 | 8 | 4 | | 39 | 71 | 44 | 33 | 358 | 329 | 273 |
| 76 | | 10 | 20 | 16 | 8 | 2 | 6 | 4 | | 226 | 231 | 235 | 244 | 177 | 111 | 351 | | 7 | 6 | 6 | 7 | 12 | 8 | 5 | | 30 | 63 | 41 | 34 | 2 | 310 | 249 |
| 80 | | 12 | 23 | 18 | 7 | 3 | 7 | 10 | | 214 | 220 | 217 | 229 | 46 | 53 | 345 | | 8 | 7 | 6 | 7 | 12 | 8 | 5 | | 28 | 61 | 40 | 35 | 4 | 298 | 238 |

### JULY

| KM | \| | W1 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W1 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 AMP -80 | -70 | -60 | -50 | -40 | -30 | -20 | \| | W2 PHASE -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | | 24 | 34 | 39 | 38 | 27 | 11 | 4 | | 211 | 197 | 164 | 146 | 144 | 160 | 242 | | 5 | 4 | 9 | 8 | 7 | 7 | 4 | | 2 | 336 | 234 | 234 | 275 | 299 | 299 |
| 20 | | 28 | 36 | 44 | 43 | 29 | 10 | 4 | | 206 | 184 | 152 | 137 | 136 | 152 | 261 | | 9 | 5 | 10 | 11 | 9 | 7 | 5 | | 9 | 356 | 225 | 230 | 271 | 293 | 293 |
| 24 | | 11 | 30 | 47 | 46 | 28 | 6 | 5 | | 109 | 97 | 103 | 105 | 104 | 85 | 315 | | 6 | 7 | 11 | 17 | 13 | 8 | 4 | | 31 | 41 | 196 | 213 | 248 | 269 | 277 |
| 28 | | 27 | 53 | 64 | 58 | 36 | 17 | 9 | | 50 | 51 | 52 | 59 | 53 | 23 | 344 | | 1 | 5 | 13 | 21 | 16 | 8 | 4 | | 257 | 78 | 163 | 202 | 221 | 234 | 245 |
| 32 | | 31 | 60 | 79 | 82 | 59 | 32 | 13 | | 45 | 39 | 30 | 28 | 21 | 8 | 354 | | 1 | 6 | 13 | 20 | 17 | 10 | 3 | | 232 | 117 | 144 | 187 | 198 | 194 | 196 |
| 36 | | 30 | 56 | 77 | 87 | 70 | 38 | 14 | | 44 | 32 | 18 | 9 | 3 | 358 | 354 | | 2 | 6 | 12 | 14 | 17 | 11 | 4 | | 182 | 135 | 112 | 149 | 169 | 165 | 160 |
| 40 | | 21 | 44 | 63 | 70 | 59 | 32 | 10 | | 56 | 30 | 13 | 355 | 347 | 346 | 354 | | 1 | 4 | 9 | 11 | 13 | 11 | 4 | | 276 | 157 | 94 | 105 | 133 | 140 | 139 |
| 44 | | 16 | 33 | 49 | 49 | 39 | 21 | 6 | | 67 | 28 | 10 | 349 | 332 | 330 | 337 | | 1 | 3 | 6 | 12 | 12 | 9 | 4 | | 3 | 355 | 35 | 68 | 98 | 117 | 120 |
| 48 | | 16 | 27 | 41 | 39 | 31 | 17 | 6 | | 61 | 25 | 5 | 345 | 322 | 304 | 292 | | 1 | 4 | 5 | 4 | 10 | 6 | 2 | | 10 | 301 | 298 | 48 | 78 | 93 | 98 |
| 52 | | 20 | 26 | 37 | 33 | 27 | 18 | 7 | | 47 | 21 | 360 | 340 | 308 | 280 | 261 | | 2 | 5 | 12 | 11 | 7 | 3 | 2 | | 259 | 265 | 247 | 243 | 252 | 236 | 148 |
| 56 | | 23 | 24 | 27 | 25 | 24 | 19 | 8 | | 35 | 10 | 343 | 316 | 276 | 251 | 220 | | 4 | 7 | 15 | 19 | 11 | 6 | 3 | | 251 | 228 | 239 | 238 | 254 | 254 | 185 |
| 60 | | 22 | 19 | 18 | 22 | 28 | 22 | 13 | | 26 | 358 | 314 | 271 | 237 | 218 | 188 | | 5 | 9 | 15 | 22 | 15 | 6 | 4 | | 247 | 210 | 230 | 234 | 230 | 253 | 201 |
| 64 | | 19 | 13 | 14 | 21 | 27 | 23 | 14 | | 17 | 340 | 276 | 242 | 220 | 200 | 176 | | 5 | 9 | 14 | 21 | 15 | 6 | 4 | | 245 | 201 | 220 | 229 | 240 | 242 | 201 |
| 68 | | 13 | 8 | 13 | 16 | 19 | 18 | 11 | | 0 | 302 | 238 | 216 | 205 | 187 | 171 | | 5 | 9 | 12 | 17 | 12 | 4 | 5 | | 241 | 193 | 202 | 220 | 228 | 231 | 213 |
| 72 | | 9 | 9 | 14 | 13 | 13 | 11 | 5 | | 330 | 249 | 204 | 175 | 174 | 167 | 166 | | 4 | 9 | 12 | 11 | 8 | 3 | 3 | | 236 | 186 | 181 | 200 | 210 | 214 | 237 |
| 76 | | 8 | 12 | 17 | 15 | 10 | 6 | 1 | | 290 | 222 | 182 | 138 | 119 | 121 | 352 | | 3 | 8 | 12 | 8 | 8 | 2 | 3 | | 229 | 180 | 159 | 144 | 184 | 191 | 262 |
| 80 | | 9 | 15 | 19 | 19 | 13 | 7 | 4 | | 266 | 210 | 171 | 119 | 91 | 74 | 345 | | 2 | 7 | 13 | 9 | 7 | 2 | 3 | | 222 | 173 | 147 | 134 | 164 | 174 | 274 |

110

AMPLITUDE (0.1K) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF TEMPERATURE

## AUGUST

| | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 DEG |
| 18 | 28 | 49 | 52 | 38 | 17 | 2 | 4 | 210 | 184 | 154 | 130 | 116 | 95 | 293 | 4 | 17 | 30 | 35 | 24 | 14 | 6 | 29 | 356 | 334 | 327 | 329 | 333 | 346 |
| 20 | 41 | 60 | 63 | 44 | 19 | 3 | 6 | 184 | 170 | 144 | 123 | 110 | 65 | 299 | 11 | 27 | 40 | 43 | 29 | 17 | 7 | 3 | 349 | 330 | 324 | 326 | 329 | 341 |
| 24 | 29 | 50 | 63 | 46 | 21 | 6 | 7 | 105 | 111 | 115 | 105 | 87 | 27 | 311 | 10 | 29 | 44 | 48 | 23 | 18 | 6 | 333 | 331 | 318 | 316 | 316 | 317 | 327 |
| 28 | 27 | 50 | 54 | 42 | 22 | 11 | 7 | 75 | 66 | 68 | 72 | 55 | 10 | 322 | 5 | 14 | 26 | 40 | 31 | 16 | 4 | 290 | 294 | 292 | 298 | 299 | 295 | 300 |
| 32 | 26 | 53 | 62 | 45 | 27 | 15 | 7 | 65 | 47 | 32 | 29 | 22 | 2 | 335 | 5 | 10 | 18 | 26 | 25 | 14 | 4 | 259 | 241 | 228 | 253 | 266 | 253 | 234 |
| 36 | 25 | 51 | 66 | 51 | 30 | 15 | 5 | 55 | 36 | 15 | 3 | 360 | 353 | 348 | 5 | 12 | 25 | 30 | 26 | 17 | 7 | 241 | 208 | 189 | 200 | 218 | 210 | 195 |
| 40 | 28 | 47 | 60 | 49 | 26 | 11 | 3 | 36 | 26 | 4 | 346 | 342 | 341 | 4 | 3 | 9 | 26 | 38 | 33 | 22 | 10 | 236 | 198 | 173 | 175 | 186 | 182 | 176 |
| 44 | 31 | 42 | 47 | 35 | 20 | 9 | 2 | 14 | 8 | 349 | 329 | 310 | 293 | 258 | 2 | 3 | 19 | 29 | 27 | 20 | 9 | 226 | 213 | 167 | 161 | 166 | 167 | 169 |
| 48 | 29 | 40 | 41 | 29 | 21 | 14 | 7 | 348 | 339 | 321 | 290 | 266 | 254 | 233 | 1 | 4 | 15 | 21 | 19 | 15 | 7 | 217 | 266 | 182 | 162 | 153 | 162 | 179 |
| 52 | 28 | 46 | 50 | 41 | 30 | 19 | 11 | 308 | 309 | 294 | 261 | 238 | 226 | 210 | 2 | 7 | 18 | 19 | 13 | 11 | 7 | 224 | 247 | 207 | 189 | 170 | 177 | 209 |
| 56 | 34 | 53 | 62 | 54 | 38 | 24 | 16 | 274 | 287 | 279 | 252 | 224 | 196 | 177 | 4 | 11 | 22 | 26 | 18 | 10 | 7 | 224 | 216 | 212 | 210 | 215 | 215 | 240 |
| 60 | 43 | 59 | 64 | 52 | 35 | 26 | 20 | 256 | 269 | 267 | 248 | 215 | 176 | 155 | 4 | 15 | 19 | 25 | 24 | 11 | 5 | 224 | 196 | 201 | 204 | 207 | 204 | 244 |
| 64 | 46 | 60 | 58 | 43 | 27 | 23 | 20 | 247 | 256 | 256 | 245 | 210 | 166 | 146 | 4 | 17 | 15 | 21 | 24 | 10 | 2 | 224 | 184 | 184 | 194 | 197 | 182 | 213 |
| 68 | 43 | 55 | 46 | 32 | 19 | 15 | 14 | 239 | 243 | 243 | 244 | 210 | 168 | 151 | 2 | 16 | 12 | 16 | 20 | 10 | 2 | 224 | 175 | 162 | 176 | 181 | 158 | 163 |
| 72 | 37 | 48 | 35 | 21 | 12 | 8 | 8 | 231 | 229 | 228 | 238 | 215 | 197 | 174 | 0 | 14 | 12 | 14 | 16 | 11 | 3 | 229 | 166 | 141 | 148 | 150 | 139 | 152 |
| 76 | 31 | 43 | 28 | 14 | 9 | 8 | 7 | 223 | 216 | 208 | 234 | 229 | 257 | 233 | 1 | 12 | 12 | 15 | 17 | 13 | 4 | 41 | 156 | 124 | 130 | 128 | 132 | 157 |
| 80 | 27 | 40 | 24 | 9 | 7 | 11 | 10 | 215 | 208 | 193 | 228 | 247 | 280 | 260 | 2 | 11 | 12 | 16 | 18 | 14 | 5 | 42 | 149 | 118 | 119 | 112 | 127 | 160 |

## SEPTEMBER

| | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 42 | 70 | 88 | 67 | 34 | 13 | 2 | 162 | 123 | 94 | 83 | 82 | 79 | 30 | 2 | 11 | 16 | 7 | 2 | 1 | 1 | 24 | 102 | 118 | 124 | 159 | 171 | 41 |
| 20 | 58 | 93 | 108 | 79 | 39 | 15 | 3 | 123 | 105 | 89 | 80 | 78 | 74 | 12 | 6 | 15 | 17 | 7 | 2 | 1 | 1 | 42 | 95 | 117 | 124 | 168 | 170 | 47 |
| 24 | 68 | 107 | 121 | 89 | 43 | 13 | 3 | 71 | 73 | 75 | 71 | 66 | 53 | 323 | 4 | 9 | 14 | 7 | 3 | 1 | 1 | 31 | 90 | 123 | 134 | 188 | 184 | 61 |
| 28 | 62 | 93 | 97 | 76 | 37 | 10 | 6 | 52 | 49 | 54 | 57 | 47 | 4 | 282 | 1 | 2 | 7 | 4 | 3 | 2 | 2 | 8 | 97 | 154 | 159 | 207 | 188 | 79 |
| 32 | 58 | 82 | 72 | 53 | 32 | 17 | 9 | 43 | 32 | 23 | 23 | 5 | 315 | 266 | 1 | 2 | 5 | 3 | 2 | 2 | 1 | 260 | 279 | 230 | 199 | 221 | 175 | 103 |
| 36 | 52 | 71 | 63 | 49 | 36 | 23 | 11 | 37 | 17 | 348 | 336 | 325 | 296 | 256 | 2 | 5 | 7 | 2 | 1 | 1 | 1 | 246 | 280 | 271 | 272 | 286 | 158 | 135 |
| 40 | 42 | 56 | 62 | 56 | 40 | 25 | 11 | 31 | 1 | 321 | 306 | 301 | 282 | 248 | 2 | 6 | 9 | 4 | 2 | 1 | 1 | 257 | 290 | 288 | 310 | 360 | 84 | 159 |
| 44 | 28 | 44 | 55 | 48 | 33 | 20 | 9 | 2 | 334 | 306 | 296 | 294 | 279 | 249 | 2 | 7 | 8 | 4 | 3 | 1 | 1 | 270 | 287 | 287 | 331 | 24 | 52 | 202 |
| 48 | 33 | 52 | 55 | 41 | 25 | 13 | 7 | 328 | 315 | 303 | 298 | 300 | 289 | 259 | 1 | 8 | 8 | 2 | 3 | 2 | 2 | 291 | 280 | 271 | 311 | 62 | 50 | 269 |
| 52 | 45 | 67 | 65 | 43 | 23 | 10 | 5 | 318 | 315 | 308 | 306 | 308 | 301 | 263 | 0 | 7 | 9 | 3 | 4 | 2 | 3 | 74 | 266 | 250 | 213 | 112 | 62 | 279 |
| 56 | 51 | 77 | 76 | 52 | 25 | 7 | 3 | 317 | 320 | 313 | 309 | 311 | 299 | 234 | 2 | 5 | 7 | 6 | 6 | 2 | 2 | 123 | 248 | 236 | 205 | 163 | 90 | 260 |
| 60 | 50 | 69 | 67 | 45 | 19 | 6 | 4 | 302 | 311 | 304 | 298 | 291 | 232 | 171 | 3 | 4 | 5 | 6 | 5 | 2 | 2 | 159 | 215 | 222 | 217 | 191 | 82 | 146 |
| 64 | 46 | 54 | 49 | 34 | 15 | 10 | 5 | 285 | 298 | 294 | 288 | 269 | 205 | 156 | 5 | 5 | 4 | 6 | 5 | 1 | 4 | 172 | 190 | 211 | 235 | 216 | 85 | 129 |
| 68 | 39 | 38 | 32 | 23 | 13 | 10 | 5 | 270 | 279 | 278 | 275 | 254 | 204 | 160 | 5 | 5 | 2 | 6 | 5 | 0 | 3 | 176 | 185 | 216 | 255 | 235 | 170 | 120 |
| 72 | 30 | 28 | 21 | 15 | 11 | 8 | 2 | 255 | 255 | 250 | 252 | 248 | 210 | 175 | 5 | 4 | 2 | 4 | 4 | 1 | 1 | 171 | 188 | 248 | 272 | 248 | 234 | 45 |
| 76 | 24 | 25 | 18 | 11 | 9 | 7 | 1 | 237 | 228 | 221 | 232 | 250 | 225 | 273 | 4 | 3 | 3 | 6 | 3 | 1 | 3 | 162 | 191 | 275 | 284 | 258 | 237 | 327 |
| 80 | 18 | 23 | 18 | 9 | 8 | 6 | 3 | 225 | 212 | 203 | 207 | 251 | 241 | 309 | 4 | 2 | 4 | 7 | 3 | 2 | 5 | 156 | 202 | 287 | 290 | 245 | 230 | 321 |

## OCTOBER

| | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 41 | 66 | 64 | 40 | 19 | 4 | 1 | 153 | 141 | 131 | 123 | 121 | 117 | 269 | 7 | 9 | 5 | 6 | 7 | 4 | 1 | 308 | 282 | 266 | 252 | 260 | 251 | 116 |
| 20 | 46 | 74 | 74 | 47 | 22 | 5 | 2 | 139 | 133 | 127 | 120 | 117 | 109 | 274 | 9 | 10 | 5 | 6 | 8 | 5 | 2 | 311 | 292 | 274 | 255 | 262 | 251 | 119 |
| 24 | 40 | 66 | 74 | 51 | 24 | 4 | 3 | 102 | 110 | 114 | 111 | 103 | 80 | 273 | 7 | 9 | 3 | 4 | 8 | 5 | 2 | 316 | 320 | 329 | 265 | 268 | 250 | 127 |
| 28 | 31 | 45 | 51 | 42 | 21 | 5 | 4 | 65 | 75 | 89 | 92 | 79 | 28 | 271 | 2 | 6 | 6 | 2 | 5 | 4 | 1 | 333 | 24 | 58 | 38 | 202 | 250 | 139 |
| 32 | 28 | 40 | 40 | 34 | 22 | 8 | 5 | 39 | 30 | 34 | 41 | 32 | 353 | 270 | 2 | 11 | 12 | 7 | 2 | 1 | 1 | 105 | 68 | 76 | 67 | 349 | 249 | 144 |
| 36 | 27 | 44 | 53 | 42 | 27 | 11 | 3 | 18 | 2 | 357 | 1 | 0 | 337 | 267 | 4 | 14 | 16 | 10 | 4 | 1 | 1 | 116 | 82 | 83 | 74 | 57 | 76 | 214 |
| 40 | 22 | 48 | 64 | 50 | 31 | 12 | 5 | 4 | 346 | 341 | 343 | 344 | 325 | 262 | 5 | 15 | 16 | 11 | 6 | 2 | 1 | 119 | 88 | 89 | 78 | 71 | 69 | 264 |
| 44 | 22 | 46 | 62 | 51 | 30 | 11 | 5 | 355 | 340 | 337 | 338 | 334 | 315 | 263 | 3 | 11 | 10 | 6 | 4 | 2 | 1 | 126 | 95 | 86 | 73 | 75 | 79 | 293 |
| 48 | 25 | 50 | 61 | 48 | 27 | 9 | 5 | 351 | 338 | 336 | 334 | 323 | 299 | 269 | 1 | 6 | 3 | 1 | 2 | 3 | 2 | 166 | 112 | 55 | 51 | 94 | 92 | 321 |
| 52 | 27 | 51 | 58 | 44 | 23 | 7 | 5 | 350 | 337 | 333 | 327 | 305 | 250 | 264 | 2 | 3 | 2 | 1 | 2 | 3 | 2 | 275 | 135 | 329 | 255 | 145 | 103 | 335 |
| 56 | 27 | 47 | 49 | 33 | 18 | 10 | 3 | 349 | 338 | 327 | 309 | 269 | 206 | 210 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 289 | 107 | 329 | 222 | 183 | 101 | 354 |
| 60 | 20 | 30 | 30 | 22 | 16 | 13 | 6 | 329 | 328 | 309 | 274 | 230 | 187 | 153 | 1 | 3 | 2 | 3 | 2 | 1 | 1 | 308 | 67 | 118 | 183 | 215 | 7 | 133 |
| 64 | 16 | 16 | 17 | 19 | 14 | 12 | 8 | 298 | 297 | 267 | 237 | 207 | 180 | 140 | 2 | 2 | 5 | 3 | 1 | 3 | 1 | 24 | 38 | 125 | 160 | 254 | 350 | 96 |
| 68 | 14 | 13 | 16 | 16 | 9 | 8 | 8 | 263 | 246 | 229 | 218 | 199 | 179 | 128 | 3 | 2 | 6 | 3 | 1 | 5 | 3 | 46 | 19 | 118 | 141 | 38 | 10 | 35 |
| 72 | 14 | 16 | 17 | 11 | 3 | 3 | 6 | 234 | 222 | 214 | 207 | 203 | 182 | 108 | 6 | 2 | 6 | 3 | 2 | 7 | 6 | 49 | 27 | 107 | 126 | 55 | 30 | 18 |
| 76 | 14 | 18 | 16 | 6 | 3 | 2 | 5 | 215 | 215 | 211 | 202 | 350 | 340 | 72 | 7 | 2 | 7 | 3 | 3 | 9 | 8 | 47 | 37 | 93 | 109 | 63 | 42 | 12 |
| 80 | 14 | 18 | 14 | 2 | 8 | 6 | 6 | 203 | 213 | 212 | 186 | 358 | 347 | 47 | 8 | 1 | 7 | 3 | 4 | 10 | 10 | 47 | 44 | 85 | 101 | 67 | 48 | 9 |

## NOVEMBER

| | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 32 | 52 | 50 | 35 | 11 | 2 | 5 | 133 | 118 | 106 | 95 | 82 | 275 | 248 | 1 | 2 | 2 | 0 | 4 | 2 | 2 | 329 | 8 | 115 | 57 | 262 | 220 | 129 |
| 20 | 33 | 56 | 56 | 40 | 12 | 3 | 6 | 130 | 114 | 101 | 91 | 78 | 275 | 248 | 1 | 3 | 2 | 0 | 4 | 3 | 3 | 331 | 15 | 104 | 61 | 260 | 220 | 128 |
| 24 | 22 | 43 | 50 | 36 | 10 | 3 | 5 | 114 | 100 | 88 | 79 | 61 | 275 | 249 | 1 | 4 | 3 | 1 | 4 | 3 | 3 | 340 | 30 | 98 | 120 | 253 | 226 | 129 |
| 28 | 12 | 24 | 30 | 22 | 7 | 3 | 4 | 33 | 43 | 47 | 43 | 7 | 274 | 247 | 1 | 4 | 4 | 3 | 3 | 2 | 2 | 353 | 56 | 103 | 143 | 234 | 219 | 129 |
| 32 | 27 | 40 | 39 | 26 | 11 | 3 | 1 | 348 | 343 | 342 | 334 | 314 | 275 | 264 | 0 | 4 | 5 | 4 | 1 | 1 | 1 | 152 | 84 | 101 | 136 | 171 | 203 | 130 |
| 36 | 38 | 59 | 55 | 37 | 14 | 2 | 1 | 338 | 328 | 321 | 310 | 297 | 274 | 15 | 1 | 5 | 5 | 4 | 3 | 1 | 0 | 158 | 99 | 99 | 120 | 117 | 133 | 112 |
| 40 | 40 | 64 | 60 | 39 | 14 | 1 | 2 | 332 | 320 | 312 | 300 | 286 | 266 | 27 | 2 | 5 | 5 | 4 | 3 | 1 | 1 | 162 | 107 | 98 | 122 | 103 | 90 | 320 |
| 44 | 33 | 54 | 50 | 31 | 10 | 0 | 3 | 328 | 316 | 308 | 295 | 280 | 253 | 13 | 2 | 3 | 4 | 4 | 3 | 1 | 0 | 185 | 115 | 104 | 124 | 113 | 91 | 293 |
| 48 | 20 | 33 | 31 | 19 | 6 | 0 | 3 | 320 | 313 | 306 | 291 | 281 | 181 | 339 | 2 | 1 | 2 | 3 | 3 | 1 | 1 | 214 | 147 | 130 | 141 | 150 | 127 | 216 |
| 52 | 10 | 18 | 16 | 11 | 3 | 1 | 4 | 306 | 306 | 303 | 280 | 290 | 144 | 319 | 3 | 1 | 3 | 3 | 5 | 1 | 2 | 223 | 204 | 160 | 154 | 105 | 175 | 198 |
| 56 | 7 | 10 | 9 | 8 | 0 | 2 | 3 | 286 | 293 | 288 | 260 | 291 | 134 | 334 | 2 | 1 | 3 | 4 | 4 | 2 | 2 | 221 | 195 | 139 | 146 | 190 | 178 | 178 |
| 60 | 8 | 10 | 8 | 7 | 4 | 3 | 3 | 290 | 284 | 264 | 228 | 135 | 125 | 20 | 2 | 2 | 5 | 3 | 1 | 2 | 1 | 219 | 152 | 110 | 117 | 126 | 146 | 103 |
| 64 | 7 | 8 | 8 | 7 | 6 | 3 | 4 | 276 | 258 | 224 | 194 | 135 | 119 | 51 | 2 | 3 | 6 | 4 | 4 | 2 | 2 | 210 | 119 | 92 | 87 | 46 | 99 | 77 |
| 68 | 5 | 6 | 8 | 7 | 6 | 1 | 4 | 251 | 236 | 207 | 180 | 136 | 101 | 67 | 1 | 4 | 7 | 4 | 6 | 3 | 2 | 196 | 98 | 86 | 80 | 46 | 74 | 77 |
| 72 | 4 | 6 | 7 | 6 | 4 | 2 | 3 | 251 | 256 | 205 | 176 | 126 | 323 | 89 | 2 | 5 | 7 | 3 | 7 | 4 | 2 | 199 | 89 | 86 | 81 | 50 | 59 | 80 |
| 76 | 3 | 7 | 5 | 4 | 1 | 4 | 2 | 264 | 290 | 230 | 186 | 96 | 314 | 123 | 2 | 6 | 7 | 2 | 6 | 5 | 1 | 200 | 87 | 92 | 101 | 55 | 49 | 127 |
| 80 | 2 | 8 | 5 | 3 | 1 | 5 | 2 | 271 | 302 | 249 | 203 | 19 | 313 | 157 | 3 | 6 | 6 | 2 | 6 | 5 | 1 | 199 | 83 | 96 | 117 | 59 | 43 | 178 |

111

## SEPTEMBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 4 | 5 | 4 | 3 | 5 | 7 | 5 | 286 | 299 | 71 | 117 | 267 | 272 | 256 | 3 | 4 | 1 | 5 | 7 | 4 | 1 | 355 | 3 | 19 | 257 | 265 | 264 | 220 |
| 20 | 5 | 6 | 2 | 4 | 5 | 8 | 6 | 287 | 299 | 69 | 117 | 262 | 269 | 256 | 4 | 5 | 1 | 6 | 8 | 6 | 1 | 355 | 1 | 19 | 254 | 261 | 260 | 217 |
| 24 | 5 | 7 | 1 | 5 | 4 | 8 | 6 | 286 | 297 | 58 | 117 | 241 | 259 | 255 | 5 | 5 | 2 | 6 | 10 | 8 | 2 | 354 | 1 | 21 | 243 | 248 | 248 | 212 |
| 28 | 4 | 6 | 1 | 5 | 4 | 4 | 4 | 284 | 294 | 30 | 116 | 166 | 223 | 253 | 4 | 5 | 2 | 5 | 11 | 9 | 3 | 354 | 359 | 25 | 223 | 230 | 234 | 207 |
| 32 | 2 | 4 | 1 | 4 | 7 | 6 | 0 | 281 | 292 | 340 | 111 | 123 | 136 | 117 | 3 | 4 | 2 | 4 | 9 | 8 | 3 | 352 | 357 | 31 | 183 | 204 | 215 | 201 |
| 36 | 0 | 1 | 2 | 3 | 11 | 11 | 5 | 233 | 288 | 329 | 91 | 110 | 112 | 81 | 2 | 2 | 1 | 5 | 8 | 7 | 3 | 349 | 354 | 45 | 141 | 174 | 191 | 194 |
| 40 | 1 | 0 | 2 | 3 | 11 | 13 | 7 | 131 | 141 | 330 | 50 | 98 | 99 | 80 | 0 | 1 | 1 | 5 | 8 | 6 | 2 | 321 | 347 | 58 | 115 | 144 | 162 | 184 |
| 44 | 1 | 1 | 3 | 3 | 9 | 11 | 6 | 153 | 106 | 357 | 31 | 78 | 81 | 67 | 1 | 0 | 1 | 5 | 7 | 5 | 2 | 146 | 91 | 64 | 98 | 128 | 148 | 188 |
| 48 | 2 | 1 | 4 | 4 | 6 | 7 | 5 | 207 | 100 | 21 | 26 | 58 | 51 | 21 | 1 | 1 | 1 | 5 | 5 | 4 | 1 | 122 | 88 | 55 | 87 | 118 | 146 | 233 |
| 52 | 4 | 1 | 5 | 3 | 3 | 5 | 6 | 245 | 243 | 20 | 358 | 20 | 8 | 341 | 1 | 1 | 1 | 6 | 5 | 3 | 2 | 82 | 55 | 28 | 91 | 112 | 148 | 274 |
| 56 | 6 | 5 | 3 | 4 | 5 | 5 | 6 | 266 | 266 | 333 | 279 | 279 | 318 | 323 | 2 | 1 | 1 | 6 | 4 | 0 | 4 | 322 | 53 | 42 | 105 | 104 | 142 | 287 |
| 60 | 6 | 8 | 5 | 7 | 7 | 4 | 3 | 271 | 267 | 270 | 271 | 276 | 297 | 328 | 3 | 1 | 2 | 4 | 3 | 2 | 3 | 311 | 94 | 60 | 113 | 68 | 12 | 294 |
| 64 | 5 | 8 | 7 | 6 | 6 | 3 | 2 | 259 | 262 | 257 | 275 | 283 | 265 | 51 | 3 | 1 | 2 | 2 | 3 | 5 | 2 | 314 | 113 | 72 | 120 | 38 | 12 | 326 |
| 68 | 3 | 7 | 6 | 4 | 3 | 2 | 4 | 219 | 254 | 260 | 312 | 316 | 185 | 78 | 2 | 2 | 2 | 1 | 3 | 6 | 2 | 349 | 103 | 89 | 112 | 21 | 18 | 48 |
| 72 | 4 | 4 | 3 | 5 | 4 | 4 | 6 | 160 | 237 | 287 | 15 | 29 | 145 | 78 | 2 | 3 | 2 | 1 | 3 | 7 | 5 | 87 | 103 | 119 | 88 | 14 | 25 | 67 |
| 76 | 7 | 3 | 3 | 8 | 7 | 6 | 8 | 142 | 186 | 354 | 35 | 52 | 135 | 75 | 5 | 5 | 2 | 2 | 3 | 8 | 7 | 103 | 101 | 144 | 68 | 10 | 31 | 70 |
| 80 | 8 | 3 | 4 | 10 | 9 | 7 | 9 | 136 | 147 | 19 | 42 | 58 | 130 | 72 | 7 | 5 | 2 | 2 | 3 | 8 | 8 | 106 | 98 | 162 | 60 | 7 | 34 | 73 |

## OCTOBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 5 | 8 | 2 | 18 | 28 | 29 | 16 | 304 | 307 | 241 | 197 | 222 | 227 | 225 | 4 | 4 | 3 | 10 | 10 | 6 | 1 | 31 | 43 | 316 | 308 | 319 | 349 | 24 |
| 20 | 7 | 10 | 1 | 21 | 33 | 35 | 20 | 305 | 312 | 109 | 184 | 209 | 216 | 213 | 5 | 4 | 3 | 11 | 12 | 7 | 1 | 31 | 43 | 311 | 304 | 314 | 341 | 9 |
| 24 | 8 | 12 | 8 | 32 | 47 | 51 | 32 | 307 | 326 | 77 | 153 | 176 | 185 | 184 | 5 | 4 | 3 | 12 | 14 | 8 | 2 | 27 | 42 | 300 | 295 | 299 | 313 | 316 |
| 28 | 9 | 13 | 18 | 48 | 72 | 74 | 47 | 309 | 342 | 74 | 126 | 145 | 155 | 158 | 4 | 3 | 2 | 10 | 13 | 9 | 3 | 21 | 39 | 277 | 277 | 277 | 277 | 281 |
| 32 | 9 | 13 | 26 | 63 | 99 | 104 | 65 | 311 | 360 | 70 | 108 | 124 | 136 | 141 | 2 | 1 | 2 | 8 | 12 | 11 | 5 | 359 | 22 | 228 | 237 | 244 | 251 | 270 |
| 36 | 8 | 13 | 29 | 66 | 106 | 110 | 65 | 316 | 13 | 65 | 94 | 112 | 120 | 124 | 1 | 1 | 2 | 8 | 13 | 14 | 6 | 260 | 234 | 188 | 191 | 212 | 231 | 249 |
| 40 | 7 | 12 | 26 | 57 | 89 | 85 | 45 | 322 | 19 | 56 | 80 | 97 | 102 | 103 | 2 | 2 | 3 | 10 | 14 | 16 | 6 | 230 | 226 | 170 | 167 | 192 | 213 | 225 |
| 44 | 6 | 9 | 20 | 44 | 58 | 58 | 31 | 320 | 17 | 47 | 66 | 78 | 75 | 69 | 2 | 2 | 2 | 8 | 14 | 14 | 4 | 208 | 220 | 154 | 149 | 171 | 190 | 211 |
| 48 | 7 | 7 | 17 | 36 | 44 | 49 | 29 | 309 | 1 | 43 | 58 | 62 | 58 | 51 | 1 | 1 | 0 | 5 | 12 | 14 | 2 | 167 | 230 | 47 | 135 | 157 | 179 | 227 |
| 52 | 8 | 8 | 16 | 30 | 36 | 37 | 24 | 306 | 352 | 37 | 48 | 48 | 36 | 41 | 1 | 2 | 2 | 3 | 10 | 11 | 2 | 112 | 261 | 342 | 131 | 154 | 180 | 317 |
| 56 | 7 | 8 | 15 | 23 | 31 | 37 | 17 | 318 | 360 | 19 | 17 | 4 | 338 | 2 | 2 | 3 | 2 | 2 | 8 | 5 | 2 | 337 | 281 | 341 | 119 | 146 | 166 | 26 |
| 60 | 5 | 6 | 16 | 26 | 34 | 47 | 15 | 350 | 7 | 348 | 342 | 336 | 309 | 326 | 4 | 3 | 2 | 3 | 5 | 3 | 3 | 321 | 299 | 0 | 67 | 115 | 35 | 77 |
| 64 | 3 | 3 | 16 | 29 | 35 | 48 | 13 | 46 | 353 | 326 | 319 | 318 | 294 | 300 | 3 | 1 | 2 | 4 | 4 | 7 | 5 | 311 | 331 | 14 | 44 | 55 | 10 | 106 |
| 68 | 3 | 4 | 14 | 27 | 31 | 44 | 14 | 124 | 243 | 301 | 303 | 304 | 284 | 283 | 1 | 2 | 2 | 4 | 6 | 8 | 7 | 249 | 77 | 356 | 15 | 25 | 5 | 126 |
| 72 | 6 | 11 | 14 | 21 | 26 | 39 | 17 | 163 | 222 | 269 | 287 | 290 | 275 | 279 | 4 | 4 | 2 | 4 | 7 | 8 | 10 | 155 | 111 | 338 | 340 | 12 | 4 | 134 |
| 76 | 9 | 16 | 15 | 17 | 20 | 33 | 18 | 177 | 220 | 246 | 267 | 275 | 266 | 277 | 8 | 6 | 2 | 5 | 8 | 7 | 13 | 148 | 119 | 323 | 315 | 6 | 5 | 138 |
| 80 | 11 | 19 | 16 | 14 | 17 | 27 | 15 | 183 | 219 | 234 | 247 | 260 | 253 | 269 | 10 | 7 | 3 | 5 | 8 | 6 | 14 | 147 | 122 | 317 | 304 | 2 | 2 | 140 |

## NOVEMBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 9 | 9 | 14 | 39 | 54 | 63 | 42 | 293 | 342 | 138 | 182 | 210 | 225 | 232 | 5 | 3 | 8 | 16 | 15 | 9 | 2 | 43 | 30 | 273 | 300 | 327 | 6 | 76 |
| 20 | 12 | 12 | 19 | 50 | 70 | 80 | 53 | 304 | 353 | 129 | 177 | 204 | 220 | 227 | 6 | 3 | 10 | 19 | 18 | 10 | 3 | 47 | 43 | 266 | 295 | 321 | 1 | 74 |
| 24 | 14 | 19 | 30 | 68 | 98 | 105 | 67 | 327 | 14 | 113 | 166 | 190 | 204 | 213 | 5 | 2 | 11 | 20 | 19 | 9 | 3 | 60 | 99 | 246 | 280 | 303 | 348 | 76 |
| 28 | 17 | 26 | 38 | 77 | 111 | 106 | 61 | 350 | 28 | 100 | 152 | 172 | 182 | 186 | 3 | 4 | 10 | 16 | 14 | 4 | 2 | 91 | 142 | 214 | 251 | 274 | 317 | 66 |
| 32 | 19 | 29 | 38 | 71 | 106 | 101 | 59 | 5 | 35 | 86 | 135 | 151 | 153 | 151 | 3 | 6 | 11 | 16 | 13 | 5 | 2 | 144 | 149 | 172 | 200 | 219 | 245 | 343 |
| 36 | 18 | 25 | 30 | 52 | 86 | 92 | 58 | 12 | 34 | 67 | 108 | 125 | 123 | 119 | 3 | 6 | 13 | 20 | 17 | 9 | 4 | 170 | 140 | 139 | 164 | 189 | 226 | 293 |
| 40 | 15 | 18 | 21 | 36 | 67 | 74 | 47 | 14 | 24 | 31 | 71 | 96 | 96 | 89 | 2 | 5 | 14 | 22 | 20 | 14 | 4 | 176 | 111 | 113 | 143 | 176 | 213 | 255 |
| 44 | 12 | 14 | 21 | 32 | 58 | 60 | 39 | 6 | 357 | 3 | 55 | 80 | 81 | 69 | 1 | 6 | 14 | 20 | 18 | 14 | 3 | 75 | 74 | 92 | 122 | 158 | 191 | 210 |
| 48 | 10 | 14 | 24 | 34 | 62 | 59 | 39 | 353 | 335 | 2 | 59 | 78 | 78 | 60 | 2 | 8 | 12 | 18 | 14 | 9 | 2 | 34 | 52 | 76 | 107 | 144 | 181 | 209 |
| 52 | 5 | 12 | 23 | 42 | 71 | 66 | 42 | 337 | 313 | 2 | 60 | 74 | 71 | 53 | 2 | 8 | 9 | 11 | 7 | 3 | 3 | 346 | 23 | 54 | 97 | 137 | 229 | 253 |
| 56 | 6 | 9 | 16 | 43 | 71 | 68 | 41 | 191 | 247 | 353 | 45 | 49 | 47 | 38 | 5 | 9 | 7 | 1 | 2 | 5 | 5 | 282 | 339 | 3 | 66 | 213 | 291 | 244 |
| 60 | 14 | 17 | 15 | 38 | 70 | 66 | 35 | 189 | 225 | 297 | 14 | 21 | 28 | 27 | 6 | 10 | 9 | 6 | 2 | 6 | 5 | 274 | 326 | 338 | 314 | 294 | 323 | 246 |
| 64 | 16 | 19 | 20 | 39 | 70 | 61 | 30 | 194 | 225 | 275 | 345 | 1 | 12 | 13 | 4 | 8 | 9 | 9 | 4 | 6 | 5 | 276 | 325 | 331 | 317 | 336 | 345 | 251 |
| 68 | 13 | 14 | 20 | 39 | 64 | 56 | 26 | 206 | 236 | 275 | 326 | 346 | 357 | 359 | 0 | 4 | 6 | 9 | 5 | 5 | 3 | 64 | 345 | 337 | 328 | 351 | 9 | 264 |
| 72 | 8 | 10 | 19 | 37 | 58 | 51 | 23 | 229 | 261 | 285 | 314 | 331 | 343 | 345 | 6 | 3 | 4 | 7 | 5 | 5 | 2 | 91 | 89 | 6 | 349 | 0 | 32 | 295 |
| 76 | 7 | 10 | 17 | 36 | 52 | 46 | 21 | 275 | 303 | 299 | 304 | 319 | 329 | 331 | 10 | 7 | 3 | 7 | 5 | 5 | 2 | 92 | 110 | 64 | 15 | 1 | 54 | 346 |
| 80 | 9 | 11 | 16 | 33 | 48 | 41 | 18 | 303 | 325 | 311 | 298 | 309 | 319 | 320 | 12 | 9 | 5 | 7 | 4 | 5 | 3 | 93 | 115 | 90 | 34 | 5 | 65 | 6 |

## DECEMBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1K) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1K) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| 18 | 12 | 5 | 40 | 84 | 107 | 92 | 48 | 324 | 41 | 166 | 193 | 212 | 225 | 239 | 5 | 9 | 8 | 7 | 18 | 19 | 10 | 66 | 91 | 130 | 2 | 17 | 52 | 86 |
| 20 | 16 | 10 | 47 | 101 | 130 | 111 | 59 | 327 | 37 | 158 | 187 | 207 | 219 | 232 | 5 | 10 | 8 | 8 | 20 | 21 | 11 | 67 | 91 | 126 | 3 | 15 | 50 | 84 |
| 24 | 19 | 22 | 52 | 114 | 147 | 126 | 67 | 338 | 35 | 133 | 170 | 190 | 201 | 208 | 4 | 7 | 4 | 13 | 20 | 19 | 6 | 62 | 85 | 83 | 5 | 17 | 43 | 70 |
| 28 | 18 | 31 | 56 | 105 | 125 | 107 | 56 | 349 | 33 | 98 | 143 | 163 | 168 | 169 | 1 | 2 | 10 | 19 | 18 | 10 | 6 | 358 | 334 | 340 | 0 | 18 | 12 | 303 |
| 32 | 15 | 35 | 64 | 100 | 111 | 98 | 55 | 1 | 27 | 65 | 106 | 121 | 121 | 126 | 3 | 10 | 21 | 23 | 14 | 15 | 14 | 272 | 291 | 324 | 347 | 356 | 289 | 285 |
| 36 | 10 | 31 | 68 | 103 | 119 | 105 | 56 | 8 | 16 | 39 | 67 | 80 | 87 | 101 | 6 | 15 | 26 | 21 | 12 | 24 | 15 | 267 | 286 | 315 | 322 | 287 | 263 | 279 |
| 40 | 5 | 24 | 65 | 102 | 118 | 95 | 45 | 7 | 353 | 14 | 38 | 55 | 64 | 81 | 6 | 16 | 26 | 17 | 19 | 24 | 9 | 270 | 286 | 309 | 294 | 241 | 243 | 264 |
| 44 | 3 | 21 | 52 | 83 | 95 | 76 | 35 | 311 | 329 | 353 | 19 | 38 | 48 | 60 | 4 | 12 | 16 | 14 | 20 | 16 | 1 | 274 | 288 | 302 | 262 | 224 | 221 | 227 |
| 48 | 6 | 24 | 44 | 66 | 76 | 64 | 30 | 274 | 311 | 337 | 7 | 30 | 42 | 50 | 2 | 6 | 10 | 11 | 15 | 8 | 4 | 310 | 298 | 304 | 248 | 214 | 200 | 63 |
| 52 | 8 | 26 | 41 | 53 | 63 | 55 | 27 | 260 | 298 | 325 | 0 | 30 | 46 | 50 | 2 | 3 | 4 | 6 | 10 | 2 | 7 | 8 | 351 | 339 | 216 | 203 | 167 | 30 |
| 56 | 9 | 24 | 37 | 48 | 56 | 43 | 24 | 246 | 282 | 315 | 341 | 10 | 27 | 40 | 2 | 4 | 4 | 8 | 10 | 2 | 7 | 25 | 43 | 51 | 154 | 186 | 93 | 27 |
| 60 | 9 | 25 | 37 | 51 | 55 | 37 | 20 | 234 | 260 | 298 | 315 | 341 | 358 | 21 | 1 | 4 | 2 | 8 | 7 | 5 | 6 | 4 | 32 | 43 | 123 | 149 | 76 | 28 |
| 64 | 9 | 22 | 30 | 50 | 55 | 39 | 20 | 233 | 254 | 288 | 297 | 319 | 329 | 355 | 1 | 4 | 2 | 9 | 8 | 6 | 3 | 333 | 21 | 350 | 97 | 103 | 73 | 43 |
| 68 | 7 | 17 | 21 | 44 | 54 | 42 | 21 | 238 | 258 | 286 | 284 | 301 | 311 | 334 | 1 | 5 | 4 | 9 | 10 | 4 | 2 | 343 | 28 | 345 | 73 | 75 | 69 | 85 |
| 72 | 5 | 10 | 12 | 37 | 52 | 43 | 21 | 240 | 271 | 281 | 273 | 287 | 297 | 319 | 1 | 7 | 5 | 11 | 13 | 4 | 2 | 42 | 43 | 359 | 56 | 61 | 64 | 149 |
| 76 | 3 | 8 | 6 | 31 | 51 | 45 | 24 | 263 | 308 | 294 | 262 | 274 | 288 | 309 | 2 | 8 | 7 | 12 | 15 | 2 | 4 | 57 | 49 | 3 | 47 | 54 | 58 | 170 |
| 80 | 3 | 8 | 2 | 26 | 50 | 44 | 23 | 287 | 337 | 338 | 252 | 266 | 282 | 302 | 2 | 9 | 8 | 13 | 15 | 1 | 5 | 55 | 50 | 6 | 41 | 52 | 46 | 170 |

N HEMISPHERE                    AMPLITUDE (0.1K) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF TEMPERATURE

## JANUARY

| KM LAT | WAVE 1 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6 | 6 | 39 | 77 | 116 | 128 | 78 | 344 | 122 | 166 | 181 | 186 | 191 | 198 | 5 | 8 | 10 | 28 | 43 | 41 | 14 | 75 | 53 | 347 | 332 | 342 | 2 | 18 |
| 20 | 8 | 7 | 44 | 89 | 138 | 155 | 98 | 345 | 99 | 161 | 178 | 184 | 188 | 194 | 5 | 9 | 13 | 33 | 49 | 45 | 15 | 72 | 48 | 344 | 329 | 339 | 359 | 15 |
| 24 | 11 | 12 | 39 | 90 | 148 | 164 | 104 | 349 | 52 | 145 | 168 | 175 | 180 | 182 | 4 | 8 | 18 | 37 | 47 | 36 | 11 | 63 | 26 | 338 | 325 | 329 | 348 | 350 |
| 28 | 12 | 20 | 29 | 68 | 110 | 117 | 73 | 350 | 28 | 98 | 144 | 159 | 163 | 163 | 2 | 8 | 20 | 33 | 33 | 20 | 6 | 0 | 339 | 326 | 317 | 308 | 312 | 300 |
| 32 | 11 | 28 | 43 | 55 | 73 | 73 | 49 | 351 | 16 | 45 | 92 | 121 | 125 | 126 | 4 | 11 | 19 | 24 | 23 | 21 | 9 | 283 | 297 | 309 | 295 | 261 | 240 | 246 |
| 36 | 8 | 30 | 63 | 77 | 77 | 75 | 49 | 352 | 9 | 25 | 48 | 66 | 73 | 86 | 6 | 13 | 16 | 20 | 33 | 33 | 12 | 262 | 269 | 280 | 247 | 214 | 213 | 229 |
| 40 | 5 | 27 | 69 | 97 | 103 | 95 | 54 | 348 | 2 | 15 | 30 | 39 | 48 | 64 | 6 | 14 | 16 | 25 | 41 | 36 | 9 | 247 | 247 | 244 | 208 | 196 | 203 | 216 |
| 44 | 2 | 19 | 53 | 88 | 106 | 99 | 55 | 332 | 357 | 9 | 19 | 25 | 29 | 41 | 5 | 13 | 16 | 24 | 34 | 28 | 6 | 228 | 231 | 220 | 202 | 193 | 194 | 117 |
| 48 | 2 | 12 | 36 | 69 | 93 | 93 | 53 | 301 | 352 | 6 | 11 | 13 | 13 | 17 | 5 | 12 | 14 | 20 | 27 | 21 | 10 | 210 | 219 | 215 | 215 | 202 | 180 | 92 |
| 52 | 1 | 6 | 20 | 48 | 71 | 78 | 51 | 300 | 336 | 4 | 358 | 0 | 355 | 353 | 5 | 11 | 10 | 20 | 26 | 18 | 6 | 198 | 210 | 212 | 225 | 216 | 172 | 108 |
| 56 | 1 | 5 | 7 | 35 | 61 | 73 | 51 | 308 | 255 | 302 | 322 | 334 | 333 | 336 | 5 | 9 | 5 | 19 | 29 | 16 | 6 | 189 | 194 | 149 | 208 | 210 | 167 | 210 |
| 60 | 1 | 9 | 13 | 36 | 61 | 70 | 47 | 267 | 228 | 244 | 288 | 309 | 315 | 322 | 5 | 8 | 9 | 19 | 25 | 12 | 12 | 171 | 161 | 118 | 176 | 190 | 162 | 231 |
| 64 | 1 | 10 | 15 | 38 | 59 | 63 | 42 | 258 | 229 | 242 | 262 | 286 | 298 | 311 | 4 | 7 | 8 | 18 | 20 | 7 | 14 | 153 | 132 | 106 | 150 | 171 | 160 | 234 |
| 68 | 2 | 8 | 11 | 37 | 54 | 54 | 33 | 295 | 246 | 256 | 245 | 266 | 280 | 295 | 3 | 6 | 5 | 14 | 14 | 4 | 13 | 131 | 97 | 88 | 128 | 149 | 170 | 233 |
| 72 | 2 | 6 | 9 | 33 | 48 | 43 | 24 | 309 | 280 | 282 | 232 | 247 | 261 | 274 | 2 | 6 | 2 | 11 | 9 | 2 | 9 | 84 | 60 | 46 | 100 | 122 | 208 | 230 |
| 76 | 3 | 7 | 9 | 30 | 46 | 37 | 20 | 321 | 317 | 326 | 222 | 231 | 240 | 243 | 3 | 7 | 4 | 10 | 9 | 2 | 6 | 47 | 34 | 325 | 72 | 90 | 258 | 224 |
| 80 | 4 | 9 | 12 | 28 | 44 | 35 | 21 | 327 | 333 | 344 | 214 | 219 | 222 | 217 | 3 | 8 | 6 | 11 | 9 | 3 | 3 | 31 | 20 | 312 | 53 | 69 | 282 | 212 |

## FEBRUARY

| KM LAT | WAVE 1 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5 | 2 | 22 | 49 | 77 | 94 | 60 | 342 | 144 | 172 | 196 | 214 | 217 | 217 | 10 | 8 | 7 | 10 | 45 | 22 | 17 | 156 | 85 | 291 | 330 | 12 | 356 | 119 |
| 20 | 8 | 2 | 27 | 58 | 90 | 111 | 75 | 346 | 114 | 167 | 191 | 209 | 213 | 213 | 21 | 10 | 13 | 10 | 53 | 26 | 31 | 205 | 124 | 159 | 278 | 9 | 350 | 122 |
| 24 | 8 | 5 | 28 | 63 | 96 | 110 | 76 | 346 | 65 | 151 | 176 | 194 | 202 | 202 | 15 | 16 | 21 | 16 | 30 | 17 | 4 | 114 | 326 | 358 | 346 | 331 | 16 | 265 |
| 28 | 6 | 8 | 26 | 62 | 83 | 75 | 48 | 349 | 49 | 122 | 152 | 165 | 176 | 180 | 6 | 3 | 5 | 10 | 19 | 5 | 17 | 312 | 11 | 60 | 354 | 290 | 237 | 286 |
| 32 | 4 | 11 | 27 | 58 | 74 | 57 | 35 | 349 | 39 | 61 | 112 | 120 | 128 | 138 | 10 | 15 | 25 | 26 | 12 | 25 | 31 | 331 | 158 | 176 | 201 | 231 | 232 | 271 |
| 36 | 1 | 13 | 33 | 63 | 86 | 75 | 39 | 342 | 29 | 52 | 78 | 90 | 88 | 94 | 10 | 10 | 15 | 31 | 41 | 39 | 24 | 295 | 168 | 167 | 181 | 194 | 217 | 221 |
| 40 | 1 | 12 | 34 | 65 | 91 | 90 | 45 | 293 | 19 | 34 | 55 | 66 | 67 | 68 | 12 | 15 | 24 | 23 | 54 | 45 | 20 | 340 | 9 | 162 | 141 | 181 | 205 | 186 |
| 44 | 2 | 12 | 30 | 53 | 78 | 83 | 38 | 329 | 14 | 31 | 48 | 55 | 57 | 57 | 4 | 1 | 4 | 14 | 21 | 23 | 5 | 103 | 125 | 210 | 138 | 211 | 189 | 303 |
| 48 | 4 | 13 | 22 | 40 | 66 | 72 | 35 | 355 | 24 | 35 | 46 | 38 | 40 | 37 | 7 | 5 | 4 | 7 | 21 | 13 | 3 | 67 | 218 | 72 | 178 | 172 | 165 | 225 |
| 52 | 5 | 12 | 15 | 29 | 63 | 68 | 35 | 12 | 43 | 51 | 32 | 13 | 15 | 12 | 3 | 6 | 5 | 3 | 2 | 1 | 5 | 92 | 122 | 157 | 133 | 15 | 184 | 82 |
| 56 | 4 | 10 | 6 | 29 | 72 | 71 | 34 | 47 | 81 | 87 | 349 | 349 | 351 | 357 | 5 | 7 | 12 | 7 | 6 | 3 | 5 | 131 | 105 | 110 | 93 | 2 | 338 | 23 |
| 60 | 2 | 7 | 6 | 45 | 81 | 78 | 38 | 128 | 141 | 258 | 320 | 329 | 332 | 345 | 4 | 11 | 14 | 9 | 9 | 6 | 3 | 102 | 94 | 104 | 68 | 3 | 351 | 25 |
| 64 | 4 | 9 | 14 | 51 | 80 | 79 | 40 | 188 | 202 | 268 | 307 | 315 | 319 | 337 | 4 | 8 | 11 | 10 | 11 | 7 | 6 | 92 | 88 | 84 | 50 | 1 | 353 | 25 |
| 68 | 5 | 11 | 18 | 47 | 70 | 70 | 40 | 212 | 235 | 276 | 297 | 303 | 309 | 332 | 3 | 6 | 8 | 11 | 10 | 6 | 5 | 72 | 79 | 60 | 34 | 359 | 357 | 20 |
| 72 | 5 | 13 | 21 | 40 | 59 | 58 | 37 | 236 | 258 | 283 | 288 | 291 | 299 | 327 | 2 | 2 | 7 | 10 | 10 | 4 | 3 | 64 | 41 | 18 | 19 | 3 | 357 | 12 |
| 76 | 6 | 15 | 21 | 34 | 50 | 46 | 34 | 253 | 275 | 290 | 277 | 277 | 286 | 322 | 2 | 3 | 9 | 11 | 9 | 3 | 2 | 36 | 323 | 354 | 9 | 3 | 15 | 332 |
| 80 | 6 | 16 | 21 | 30 | 45 | 39 | 30 | 264 | 284 | 294 | 269 | 265 | 274 | 318 | 1 | 4 | 9 | 11 | 8 | 2 | 2 | 8 | 308 | 343 | 5 | 9 | 27 | 269 |

## MARCH

| KM LAT | WAVE 1 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 6 | 3 | 26 | 66 | 96 | 102 | 68 | 314 | 267 | 191 | 208 | 215 | 214 | 209 | 4 | 3 | 10 | 21 | 20 | 15 | 6 | 86 | 25 | 298 | 285 | 276 | 272 | 245 |
| 20 | 8 | 3 | 29 | 75 | 110 | 116 | 75 | 320 | 301 | 185 | 205 | 212 | 212 | 208 | 4 | 3 | 10 | 23 | 23 | 17 | 6 | 87 | 28 | 297 | 281 | 270 | 262 | 236 |
| 24 | 10 | 7 | 24 | 72 | 109 | 107 | 64 | 331 | 9 | 159 | 191 | 202 | 205 | 205 | 4 | 4 | 8 | 20 | 22 | 16 | 6 | 89 | 37 | 295 | 270 | 251 | 237 | 214 |
| 28 | 9 | 15 | 23 | 50 | 70 | 62 | 30 | 344 | 25 | 99 | 153 | 172 | 182 | 193 | 2 | 3 | 1 | 10 | 16 | 14 | 4 | 89 | 51 | 289 | 231 | 208 | 195 | 163 |
| 32 | 8 | 21 | 40 | 61 | 68 | 50 | 20 | 358 | 29 | 60 | 88 | 101 | 98 | 70 | 1 | 2 | 6 | 14 | 19 | 16 | 6 | 256 | 82 | 128 | 152 | 160 | 155 | 110 |
| 36 | 7 | 22 | 50 | 88 | 108 | 94 | 52 | 6 | 28 | 45 | 63 | 68 | 63 | 47 | 2 | 1 | 11 | 21 | 23 | 18 | 7 | 265 | 138 | 125 | 135 | 142 | 141 | 105 |
| 40 | 5 | 19 | 50 | 95 | 124 | 119 | 72 | 5 | 24 | 36 | 51 | 57 | 52 | 41 | 3 | 2 | 11 | 22 | 23 | 17 | 6 | 267 | 183 | 124 | 128 | 134 | 136 | 110 |
| 44 | 4 | 14 | 37 | 77 | 103 | 102 | 61 | 340 | 13 | 30 | 45 | 49 | 47 | 41 | 3 | 1 | 6 | 12 | 13 | 10 | 3 | 271 | 224 | 134 | 132 | 144 | 146 | 129 |
| 48 | 5 | 11 | 24 | 58 | 80 | 80 | 46 | 315 | 1 | 23 | 35 | 39 | 38 | 34 | 3 | 2 | 3 | 4 | 7 | 6 | 2 | 284 | 299 | 174 | 180 | 190 | 158 | 105 |
| 52 | 4 | 8 | 17 | 46 | 70 | 71 | 42 | 303 | 0 | 11 | 16 | 19 | 19 | 13 | 2 | 2 | 3 | 7 | 11 | 4 | 4 | 312 | 332 | 203 | 242 | 225 | 175 | 85 |
| 56 | 1 | 4 | 14 | 42 | 73 | 75 | 47 | 261 | 43 | 353 | 346 | 355 | 359 | 356 | 1 | 1 | 4 | 9 | 13 | 4 | 6 | 3 | 20 | 179 | 219 | 214 | 156 | 90 |
| 60 | 2 | 4 | 15 | 41 | 67 | 70 | 45 | 160 | 167 | 322 | 318 | 337 | 343 | 346 | 2 | 2 | 3 | 6 | 8 | 3 | 6 | 71 | 117 | 153 | 196 | 185 | 92 | 99 |
| 64 | 4 | 8 | 16 | 38 | 56 | 59 | 36 | 181 | 196 | 302 | 299 | 320 | 328 | 336 | 3 | 3 | 2 | 4 | 4 | 4 | 5 | 103 | 138 | 117 | 156 | 123 | 42 | 113 |
| 68 | 4 | 9 | 16 | 31 | 42 | 43 | 25 | 222 | 213 | 297 | 286 | 304 | 313 | 325 | 4 | 4 | 3 | 3 | 6 | 5 | 4 | 118 | 135 | 75 | 99 | 68 | 23 | 130 |
| 72 | 6 | 9 | 15 | 24 | 30 | 29 | 12 | 252 | 232 | 297 | 277 | 288 | 299 | 310 | 5 | 3 | 4 | 5 | 9 | 6 | 3 | 129 | 128 | 55 | 61 | 48 | 22 | 144 |
| 76 | 9 | 10 | 14 | 16 | 21 | 19 | 9 | 264 | 250 | 303 | 273 | 268 | 277 | 275 | 5 | 2 | 4 | 7 | 11 | 6 | 3 | 136 | 113 | 46 | 49 | 40 | 24 | 161 |
| 80 | 11 | 10 | 13 | 11 | 16 | 14 | 7 | 269 | 262 | 308 | 268 | 250 | 256 | 242 | 5 | 2 | 5 | 8 | 13 | 6 | 2 | 141 | 100 | 43 | 43 | 38 | 30 | 156 |

## APRIL

| KM LAT | WAVE 1 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1K) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 4 | 8 | 2 | 21 | 24 | 14 | 6 | 304 | 320 | 141 | 163 | 170 | 174 | 212 | 3 | 5 | 6 | 5 | 6 | 5 | 2 | 40 | 35 | 0 | 319 | 246 | 210 | 190 |
| 20 | 5 | 10 | 1 | 23 | 29 | 17 | 7 | 302 | 321 | 83 | 160 | 168 | 170 | 208 | 4 | 5 | 7 | 7 | 7 | 6 | 3 | 38 | 34 | 358 | 318 | 244 | 209 | 192 |
| 24 | 5 | 11 | 5 | 20 | 31 | 21 | 9 | 295 | 320 | 10 | 147 | 157 | 161 | 195 | 3 | 5 | 7 | 8 | 8 | 7 | 3 | 34 | 31 | 353 | 312 | 241 | 207 | 198 |
| 28 | 5 | 10 | 11 | 12 | 22 | 20 | 9 | 280 | 317 | 360 | 96 | 136 | 148 | 173 | 3 | 4 | 4 | 7 | 6 | 7 | 3 | 22 | 28 | 339 | 303 | 238 | 203 | 205 |
| 32 | 4 | 7 | 15 | 19 | 16 | 15 | 8 | 257 | 315 | 359 | 31 | 76 | 121 | 141 | 1 | 2 | 3 | 5 | 3 | 4 | 2 | 356 | 5 | 281 | 276 | 229 | 199 | 218 |
| 36 | 3 | 3 | 14 | 26 | 23 | 12 | 8 | 226 | 302 | 358 | 14 | 35 | 72 | 98 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 278 | 256 | 231 | 234 | 167 | 191 | 246 |
| 40 | 3 | 2 | 10 | 26 | 26 | 14 | 8 | 204 | 183 | 358 | 7 | 18 | 35 | 67 | 2 | 3 | 4 | 4 | 1 | 1 | 1 | 237 | 232 | 215 | 204 | 83 | 15 | 270 |
| 44 | 3 | 3 | 4 | 18 | 21 | 14 | 6 | 200 | 173 | 357 | 356 | 5 | 11 | 41 | 2 | 3 | 3 | 2 | 1 | 1 | 0 | 225 | 239 | 220 | 193 | 50 | 10 | 286 |
| 48 | 2 | 4 | 2 | 10 | 15 | 12 | 4 | 214 | 191 | 220 | 314 | 337 | 346 | 3 | 1 | 3 | 2 | 1 | 2 | 1 | 1 | 237 | 268 | 264 | 320 | 21 | 11 | 183 |
| 52 | 2 | 4 | 7 | 12 | 13 | 9 | 4 | 246 | 208 | 212 | 257 | 296 | 311 | 277 | 1 | 4 | 2 | 4 | 3 | 1 | 2 | 10 | 284 | 314 | 330 | 359 | 22 | 180 |
| 56 | 2 | 3 | 10 | 14 | 13 | 8 | 6 | 270 | 216 | 215 | 238 | 268 | 272 | 254 | 2 | 3 | 2 | 7 | 4 | 1 | 4 | 24 | 290 | 331 | 328 | 338 | 19 | 194 |
| 60 | 1 | 1 | 9 | 12 | 9 | 6 | 5 | 286 | 176 | 206 | 219 | 239 | 244 | 264 | 2 | 1 | 1 | 7 | 5 | 2 | 5 | 46 | 237 | 8 | 327 | 320 | 359 | 196 |
| 64 | 0 | 1 | 7 | 9 | 6 | 4 | 4 | 230 | 60 | 199 | 201 | 194 | 197 | 297 | 1 | 3 | 1 | 4 | 5 | 2 | 4 | 144 | 146 | 89 | 333 | 300 | 355 | 198 |
| 68 | 1 | 2 | 3 | 5 | 6 | 4 | 3 | 178 | 356 | 208 | 200 | 153 | 141 | 343 | 3 | 5 | 1 | 2 | 3 | 2 | 2 | 176 | 150 | 128 | 19 | 300 | 354 | 203 |
| 72 | 1 | 4 | 2 | 3 | 5 | 6 | 4 | 156 | 339 | 326 | 235 | 128 | 122 | 11 | 5 | 6 | 1 | 3 | 1 | 1 | 0 | 186 | 158 | 169 | 96 | 287 | 360 | 282 |
| 76 | 1 | 5 | 5 | 4 | 5 | 7 | 4 | 130 | 332 | 346 | 287 | 110 | 112 | 24 | 6 | 7 | 1 | 5 | 1 | 1 | 2 | 190 | 165 | 203 | 106 | 141 | 19 | 4 |
| 80 | 1 | 6 | 7 | 6 | 4 | 7 | 5 | 114 | 328 | 348 | 301 | 97 | 106 | 31 | 7 | 8 | 2 | 6 | 2 | 0 | 3 | 193 | 171 | 217 | 111 | 125 | 65 | 6 |

S HEMISPHERE    AMPLITUDE (0.1%) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF PRESSURE/(ZONAL MEAN PRESSURE) - 1

|  | WAVE 1 AMPLITUDE (0.1%) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1%) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20DEG |

**APRIL**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 16 | 22 | 23 | 17 | 7 | 4 | 5 | 240 | 235 | 223 | 216 | 206 | 178 | 174 | 2 | 2 | 4 | 4 | 3 | 1 | 1 | 53 | 18 | 25 | 36 | 82 | 99 | 347 |
| 20 | 18 | 23 | 22 | 16 | 6 | 5 | 5 | 233 | 229 | 218 | 210 | 199 | 176 | 176 | 2 | 3 | 4 | 4 | 3 | 1 | 1 | 50 | 26 | 30 | 37 | 82 | 99 | 5 |
| 24 | 21 | 25 | 20 | 12 | 5 | 5 | 5 | 219 | 215 | 205 | 194 | 184 | 176 | 182 | 2 | 4 | 4 | 4 | 3 | 2 | 1 | 45 | 38 | 40 | 36 | 79 | 100 | 51 |
| 28 | 23 | 24 | 16 | 8 | 3 | 4 | 5 | 210 | 203 | 184 | 162 | 149 | 179 | 190 | 3 | 4 | 5 | 4 | 2 | 2 | 1 | 44 | 40 | 44 | 30 | 69 | 98 | 71 |
| 32 | 20 | 18 | 11 | 7 | 3 | 3 | 5 | 206 | 191 | 146 | 92 | 54 | 190 | 199 | 3 | 5 | 5 | 4 | 2 | 2 | 1 | 46 | 33 | 39 | 20 | 47 | 96 | 85 |
| 36 | 14 | 9 | 11 | 13 | 7 | 2 | 5 | 204 | 172 | 89 | 51 | 23 | 224 | 207 | 2 | 5 | 5 | 5 | 2 | 1 | 1 | 51 | 22 | 27 | 9 | 23 | 89 | 90 |
| 40 | 8 | 4 | 16 | 18 | 10 | 2 | 6 | 207 | 92 | 56 | 34 | 11 | 267 | 213 | 2 | 5 | 5 | 5 | 3 | 1 | 1 | 57 | 9 | 13 | 2 | 9 | 74 | 92 |
| 44 | 4 | 9 | 20 | 22 | 12 | 3 | 6 | 199 | 50 | 43 | 26 | 5 | 282 | 217 | 1 | 5 | 6 | 6 | 3 | 1 | 0 | 64 | 1 | 4 | 356 | 3 | 52 | 93 |
| 48 | 2 | 14 | 24 | 24 | 13 | 3 | 7 | 121 | 44 | 38 | 23 | 4 | 289 | 218 | 1 | 5 | 5 | 6 | 3 | 1 | 0 | 74 | 356 | 2 | 352 | 2 | 38 | 92 |
| 52 | 5 | 19 | 29 | 27 | 14 | 4 | 8 | 68 | 39 | 32 | 20 | 3 | 290 | 219 | 1 | 5 | 5 | 5 | 3 | 0 | 0 | 98 | 352 | 4 | 352 | 9 | 25 | 256 |
| 56 | 8 | 24 | 34 | 30 | 15 | 5 | 9 | 51 | 31 | 24 | 15 | 359 | 288 | 223 | 2 | 5 | 5 | 5 | 3 | 0 | 1 | 135 | 353 | 12 | 359 | 26 | 352 | 275 |
| 60 | 11 | 29 | 38 | 33 | 17 | 6 | 10 | 39 | 23 | 15 | 7 | 349 | 282 | 228 | 2 | 5 | 6 | 6 | 4 | 0 | 1 | 160 | 358 | 15 | 11 | 46 | 21 | 281 |
| 64 | 13 | 32 | 43 | 36 | 18 | 8 | 11 | 27 | 14 | 7 | 358 | 338 | 274 | 231 | 3 | 6 | 7 | 7 | 5 | 1 | 2 | 174 | 4 | 15 | 21 | 54 | 28 | 293 |
| 68 | 15 | 35 | 45 | 38 | 19 | 10 | 12 | 14 | 6 | 0 | 350 | 326 | 268 | 232 | 4 | 8 | 8 | 8 | 6 | 2 | 3 | 179 | 10 | 12 | 26 | 56 | 32 | 299 |
| 72 | 16 | 37 | 47 | 39 | 20 | 11 | 13 | 360 | 358 | 355 | 343 | 317 | 262 | 228 | 5 | 9 | 10 | 10 | 7 | 4 | 3 | 180 | 15 | 10 | 29 | 55 | 35 | 308 |
| 76 | 18 | 37 | 47 | 39 | 21 | 12 | 14 | 343 | 350 | 351 | 338 | 310 | 258 | 221 | 6 | 10 | 11 | 11 | 8 | 5 | 3 | 178 | 19 | 8 | 30 | 53 | 39 | 317 |
| 80 | 20 | 38 | 46 | 39 | 21 | 12 | 15 | 328 | 342 | 347 | 335 | 304 | 256 | 213 | 6 | 11 | 12 | 11 | 8 | 5 | 3 | 175 | 23 | 8 | 31 | 51 | 43 | 326 |

**MAY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 13 | 17 | 16 | 8 | 3 | 4 | 3 | 193 | 199 | 195 | 199 | 204 | 161 | 133 | 6 | 8 | 5 | 1 | 2 | 3 | 2 | 146 | 150 | 159 | 136 | 92 | 79 | 67 |
| 20 | 16 | 21 | 20 | 10 | 3 | 4 | 3 | 191 | 188 | 181 | 179 | 171 | 156 | 140 | 5 | 8 | 5 | 2 | 2 | 2 | 2 | 148 | 148 | 152 | 110 | 75 | 71 | 63 |
| 24 | 24 | 33 | 31 | 16 | 6 | 3 | 1 | 185 | 172 | 161 | 151 | 130 | 140 | 164 | 4 | 6 | 4 | 2 | 2 | 2 | 1 | 153 | 145 | 132 | 74 | 42 | 43 | 58 |
| 28 | 27 | 41 | 42 | 23 | 8 | 2 | 1 | 177 | 161 | 149 | 137 | 111 | 91 | 285 | 2 | 3 | 3 | 3 | 3 | 1 | 1 | 165 | 139 | 97 | 42 | 14 | 355 | 49 |
| 32 | 25 | 41 | 48 | 28 | 10 | 3 | 4 | 165 | 151 | 140 | 126 | 92 | 16 | 315 | 2 | 0 | 2 | 4 | 3 | 2 | 0 | 182 | 85 | 14 | 1 | 340 | 304 | 236 |
| 36 | 23 | 37 | 45 | 28 | 10 | 6 | 7 | 151 | 140 | 131 | 114 | 70 | 357 | 324 | 2 | 2 | 4 | 5 | 4 | 3 | 1 | 195 | 318 | 329 | 325 | 304 | 277 | 227 |
| 40 | 22 | 33 | 38 | 24 | 11 | 9 | 9 | 138 | 128 | 121 | 101 | 49 | 351 | 330 | 2 | 3 | 5 | 7 | 6 | 4 | 2 | 202 | 315 | 316 | 304 | 279 | 260 | 224 |
| 44 | 21 | 30 | 33 | 22 | 12 | 11 | 10 | 128 | 117 | 109 | 86 | 33 | 350 | 334 | 2 | 3 | 6 | 8 | 7 | 5 | 3 | 206 | 315 | 313 | 293 | 263 | 249 | 220 |
| 48 | 22 | 29 | 31 | 22 | 14 | 12 | 11 | 120 | 107 | 97 | 72 | 25 | 353 | 338 | 3 | 3 | 5 | 8 | 8 | 6 | 3 | 209 | 316 | 313 | 288 | 255 | 241 | 220 |
| 52 | 24 | 30 | 31 | 23 | 15 | 14 | 11 | 113 | 97 | 85 | 59 | 18 | 354 | 340 | 3 | 3 | 6 | 8 | 8 | 7 | 4 | 207 | 315 | 315 | 286 | 251 | 237 | 219 |
| 56 | 26 | 32 | 31 | 23 | 16 | 14 | 11 | 105 | 87 | 73 | 45 | 9 | 353 | 340 | 3 | 3 | 6 | 8 | 8 | 8 | 4 | 204 | 310 | 315 | 289 | 247 | 232 | 216 |
| 60 | 27 | 34 | 31 | 23 | 16 | 12 | 9 | 100 | 79 | 61 | 30 | 357 | 347 | 335 | 4 | 3 | 7 | 8 | 8 | 7 | 5 | 199 | 306 | 314 | 293 | 243 | 226 | 208 |
| 64 | 28 | 35 | 30 | 24 | 16 | 8 | 7 | 96 | 73 | 51 | 16 | 346 | 335 | 326 | 4 | 3 | 8 | 9 | 8 | 7 | 6 | 194 | 302 | 317 | 295 | 236 | 218 | 200 |
| 68 | 28 | 34 | 29 | 23 | 15 | 6 | 5 | 95 | 70 | 43 | 5 | 334 | 305 | 307 | 3 | 3 | 9 | 9 | 8 | 7 | 6 | 190 | 300 | 319 | 297 | 230 | 212 | 191 |
| 72 | 25 | 31 | 26 | 22 | 14 | 5 | 3 | 96 | 67 | 36 | 355 | 321 | 270 | 284 | 3 | 3 | 10 | 10 | 8 | 6 | 7 | 187 | 301 | 322 | 299 | 228 | 211 | 189 |
| 76 | 22 | 26 | 21 | 19 | 12 | 6 | 2 | 100 | 67 | 31 | 347 | 308 | 249 | 249 | 2 | 3 | 11 | 10 | 8 | 6 | 6 | 187 | 305 | 326 | 299 | 227 | 218 | 192 |
| 80 | 17 | 19 | 15 | 15 | 11 | 6 | 2 | 108 | 70 | 26 | 336 | 291 | 240 | 174 | 2 | 3 | 11 | 10 | 8 | 6 | 6 | 188 | 311 | 331 | 300 | 230 | 230 | 200 |

**JUNE**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 21 | 28 | 28 | 15 | 7 | 7 | 6 | 220 | 221 | 221 | 204 | 178 | 152 | 141 | 5 | 4 | 3 | 4 | 6 | 5 | 2 | 172 | 148 | 1 | 58 | 68 | 81 | 74 |
| 20 | 24 | 30 | 29 | 16 | 9 | 7 | 5 | 218 | 216 | 214 | 196 | 171 | 152 | 148 | 5 | 4 | 2 | 4 | 5 | 4 | 2 | 173 | 141 | 13 | 67 | 70 | 81 | 69 |
| 24 | 29 | 35 | 32 | 18 | 10 | 6 | 4 | 214 | 205 | 199 | 181 | 158 | 151 | 171 | 2 | 4 | 2 | 3 | 3 | 2 | 1 | 175 | 118 | 59 | 95 | 71 | 73 | 44 |
| 28 | 27 | 34 | 32 | 19 | 10 | 4 | 3 | 209 | 196 | 188 | 168 | 145 | 146 | 205 | 1 | 5 | 3 | 4 | 3 | 2 | 2 | 170 | 92 | 75 | 110 | 64 | 42 | 28 |
| 32 | 22 | 28 | 26 | 14 | 7 | 1 | 3 | 206 | 191 | 182 | 154 | 119 | 115 | 237 | 1 | 5 | 4 | 5 | 4 | 3 | 3 | 169 | 77 | 65 | 97 | 51 | 32 | 27 |
| 36 | 18 | 22 | 16 | 6 | 6 | 2 | 3 | 205 | 188 | 181 | 124 | 57 | 358 | 256 | 2 | 5 | 6 | 8 | 6 | 6 | 4 | 170 | 68 | 51 | 72 | 47 | 36 | 32 |
| 40 | 15 | 16 | 8 | 5 | 9 | 4 | 3 | 206 | 186 | 184 | 31 | 15 | 343 | 263 | 2 | 5 | 7 | 8 | 12 | 9 | 5 | 175 | 61 | 41 | 57 | 46 | 38 | 35 |
| 44 | 12 | 11 | 1 | 10 | 11 | 5 | 3 | 205 | 183 | 203 | 2 | 357 | 335 | 261 | 2 | 5 | 7 | 10 | 14 | 10 | 6 | 187 | 57 | 35 | 52 | 46 | 40 | 37 |
| 48 | 9 | 6 | 6 | 14 | 12 | 5 | 2 | 207 | 173 | 357 | 353 | 347 | 328 | 258 | 3 | 5 | 8 | 10 | 14 | 11 | 6 | 200 | 52 | 31 | 51 | 51 | 44 | 40 |
| 52 | 6 | 2 | 13 | 19 | 13 | 5 | 2 | 219 | 59 | 355 | 348 | 337 | 311 | 233 | 4 | 5 | 8 | 10 | 14 | 11 | 7 | 206 | 51 | 30 | 53 | 58 | 49 | 45 |
| 56 | 5 | 8 | 20 | 24 | 13 | 4 | 4 | 255 | 11 | 351 | 343 | 325 | 262 | 191 | 5 | 5 | 8 | 10 | 14 | 12 | 7 | 205 | 51 | 30 | 54 | 65 | 55 | 49 |
| 60 | 6 | 13 | 25 | 27 | 13 | 8 | 9 | 288 | 1 | 347 | 338 | 309 | 211 | 174 | 6 | 4 | 8 | 10 | 14 | 13 | 8 | 203 | 55 | 30 | 54 | 67 | 56 | 49 |
| 64 | 9 | 18 | 30 | 30 | 13 | 15 | 16 | 299 | 355 | 342 | 334 | 291 | 194 | 168 | 7 | 4 | 8 | 11 | 14 | 15 | 9 | 200 | 59 | 31 | 53 | 64 | 53 | 46 |
| 68 | 12 | 21 | 32 | 31 | 14 | 22 | 22 | 300 | 348 | 337 | 329 | 275 | 187 | 166 | 7 | 4 | 9 | 11 | 14 | 16 | 10 | 197 | 64 | 32 | 50 | 57 | 47 | 39 |
| 72 | 14 | 22 | 34 | 33 | 15 | 27 | 26 | 295 | 339 | 331 | 325 | 266 | 182 | 165 | 6 | 5 | 10 | 13 | 16 | 18 | 10 | 193 | 66 | 33 | 48 | 49 | 40 | 33 |
| 76 | 16 | 22 | 34 | 33 | 16 | 29 | 26 | 288 | 328 | 324 | 321 | 261 | 179 | 164 | 5 | 6 | 11 | 15 | 18 | 18 | 9 | 187 | 66 | 34 | 47 | 41 | 32 | 27 |
| 80 | 16 | 21 | 34 | 34 | 15 | 29 | 24 | 278 | 312 | 316 | 318 | 263 | 175 | 164 | 3 | 8 | 12 | 17 | 21 | 19 | 7 | 176 | 65 | 35 | 45 | 36 | 24 | 19 |

**JULY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 9 | 27 | 37 | 24 | 7 | 3 | 3 | 264 | 234 | 228 | 202 | 205 | 176 | 147 | 7 | 9 | 9 | 1 | 2 | 4 | 4 | 171 | 203 | 236 | 307 | 151 | 79 | 126 |
| 20 | 14 | 33 | 40 | 28 | 10 | 5 | 3 | 242 | 224 | 218 | 191 | 183 | 169 | 159 | 6 | 8 | 11 | 2 | 3 | 3 | 4 | 143 | 207 | 235 | 278 | 151 | 88 | 122 |
| 24 | 20 | 38 | 43 | 35 | 16 | 7 | 2 | 221 | 207 | 196 | 169 | 155 | 157 | 182 | 3 | 5 | 16 | 7 | 5 | 2 | 2 | 95 | 211 | 230 | 232 | 245 | 14 | 147 |
| 28 | 14 | 28 | 37 | 39 | 19 | 6 | 1 | 209 | 186 | 170 | 146 | 130 | 131 | 227 | 5 | 3 | 23 | 12 | 8 | 2 | 2 | 85 | 201 | 223 | 221 | 229 | 205 | 160 |
| 32 | 5 | 18 | 28 | 39 | 22 | 6 | 3 | 178 | 148 | 134 | 114 | 94 | 68 | 326 | 5 | 3 | 21 | 18 | 13 | 3 | 2 | 85 | 174 | 210 | 213 | 223 | 250 | 184 |
| 36 | 6 | 19 | 29 | 44 | 30 | 13 | 6 | 87 | 100 | 90 | 81 | 59 | 29 | 344 | 5 | 5 | 24 | 23 | 17 | 5 | 3 | 94 | 166 | 204 | 204 | 216 | 216 | 181 |
| 40 | 11 | 25 | 37 | 51 | 40 | 20 | 8 | 67 | 74 | 64 | 59 | 38 | 15 | 348 | 5 | 6 | 24 | 23 | 19 | 7 | 4 | 93 | 156 | 198 | 196 | 199 | 193 | 172 |
| 44 | 15 | 31 | 45 | 57 | 46 | 25 | 10 | 66 | 64 | 53 | 47 | 27 | 8 | 348 | 3 | 6 | 22 | 23 | 18 | 7 | 5 | 94 | 161 | 192 | 190 | 198 | 178 | 168 |
| 48 | 18 | 36 | 52 | 62 | 50 | 27 | 11 | 66 | 58 | 46 | 40 | 20 | 2 | 345 | 4 | 5 | 23 | 21 | 18 | 8 | 5 | 90 | 155 | 196 | 185 | 184 | 169 | 159 |
| 52 | 21 | 40 | 57 | 66 | 53 | 29 | 11 | 64 | 55 | 41 | 35 | 14 | 355 | 339 | 4 | 5 | 21 | 22 | 17 | 8 | 5 | 89 | 170 | 195 | 187 | 188 | 164 | 160 |
| 56 | 25 | 44 | 62 | 69 | 54 | 29 | 11 | 60 | 51 | 36 | 30 | 9 | 348 | 332 | 4 | 5 | 26 | 23 | 18 | 9 | 6 | 92 | 174 | 204 | 193 | 188 | 174 | 156 |
| 60 | 28 | 47 | 63 | 69 | 52 | 28 | 10 | 56 | 47 | 33 | 26 | 2 | 339 | 322 | 2 | 7 | 25 | 27 | 19 | 8 | 6 | 101 | 186 | 203 | 200 | 200 | 180 | 166 |
| 64 | 33 | 49 | 63 | 66 | 47 | 24 | 7 | 51 | 44 | 30 | 23 | 356 | 329 | 305 | 2 | 8 | 32 | 32 | 23 | 10 | 8 | 117 | 188 | 210 | 205 | 205 | 190 | 165 |
| 68 | 35 | 49 | 61 | 61 | 42 | 21 | 6 | 47 | 41 | 28 | 21 | 351 | 318 | 279 | 2 | 11 | 31 | 35 | 26 | 10 | 9 | 153 | 191 | 204 | 200 | 209 | 195 | 175 |
| 72 | 37 | 49 | 58 | 58 | 38 | 18 | 6 | 44 | 39 | 27 | 21 | 349 | 309 | 255 | 2 | 13 | 38 | 40 | 29 | 11 | 10 | 197 | 191 | 200 | 200 | 212 | 197 | 179 |
| 76 | 36 | 46 | 55 | 55 | 35 | 15 | 6 | 40 | 39 | 28 | 24 | 350 | 306 | 249 | 2 | 15 | 38 | 42 | 31 | 13 | 10 | 185 | 190 | 204 | 204 | 207 | 198 | 181 |
| 80 | 35 | 42 | 50 | 54 | 35 | 14 | 5 | 37 | 39 | 31 | 29 | 356 | 310 | 259 | 4 | 17 | 43 | 44 | 32 | 12 | 10 | 223 | 189 | 202 | 204 | 210 | 197 | 192 |

114

S HEMISPHERE   AMPLITUDE (0.1%) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF PRESSURE/(ZONAL MEAN PRESSURE) - 1

| | WAVE 1 AMPLITUDE (0.1%) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1%) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 DEG |

**AUGUST**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 21 | 32 | 32 | 19 | 9 | 4 | 3 | 238 | 245 | 252 | 257 | 244 | 198 | 154 | 10 | 22 | 25 | 20 | 11 | 7 | 4 | 164 | 155 | 136 | 124 | 124 | 128 | 129 |
| 20 | 29 | 38 | 21 | 16 | 8 | 4 | 3 | 225 | 227 | 233 | 240 | 229 | 193 | 164 | 8 | 17 | 19 | 15 | 8 | 5 | 3 | 157 | 149 | 131 | 115 | 113 | 117 | 118 |
| 24 | 37 | 49 | 34 | 14 | 6 | 3 | 2 | 197 | 196 | 192 | 182 | 180 | 183 | 216 | 2 | 5 | 6 | 7 | 4 | 2 | 2 | 90 | 94 | 81 | 44 | 21 | 34 | 69 |
| 28 | 35 | 45 | 37 | 18 | 7 | 1 | 2 | 181 | 176 | 161 | 137 | 126 | 149 | 273 | 2 | 5 | 10 | 14 | 11 | 5 | 2 | 8 | 351 | 336 | 336 | 330 | 334 | 22 |
| 32 | 32 | 40 | 34 | 22 | 10 | 3 | 4 | 169 | 158 | 135 | 106 | 84 | 20 | 298 | 2 | 7 | 13 | 21 | 17 | 8 | 2 | 322 | 321 | 309 | 315 | 312 | 311 | 347 |
| 36 | 32 | 36 | 31 | 25 | 14 | 6 | 5 | 159 | 141 | 107 | 77 | 53 | 7 | 309 | 3 | 7 | 12 | 21 | 20 | 9 | 1 | 301 | 296 | 285 | 297 | 296 | 288 | 297 |
| 40 | 30 | 34 | 32 | 29 | 18 | 9 | 5 | 150 | 124 | 82 | 53 | 33 | 1 | 315 | 3 | 7 | 12 | 20 | 20 | 10 | 2 | 281 | 275 | 256 | 275 | 277 | 261 | 221 |
| 44 | 27 | 33 | 35 | 33 | 20 | 10 | 6 | 139 | 110 | 64 | 37 | 21 | 354 | 317 | 4 | 7 | 13 | 19 | 20 | 11 | 3 | 278 | 266 | 235 | 253 | 257 | 237 | 195 |
| 48 | 23 | 30 | 36 | 34 | 21 | 11 | 6 | 130 | 97 | 52 | 27 | 10 | 343 | 308 | 4 | 8 | 14 | 19 | 20 | 13 | 5 | 270 | 263 | 224 | 239 | 245 | 222 | 188 |
| 52 | 19 | 26 | 35 | 32 | 18 | 11 | 6 | 125 | 85 | 38 | 16 | 357 | 326 | 293 | 4 | 8 | 17 | 21 | 21 | 14 | 6 | 271 | 264 | 220 | 229 | 235 | 214 | 189 |
| 56 | 13 | 18 | 32 | 28 | 15 | 10 | 6 | 131 | 68 | 19 | 357 | 333 | 301 | 268 | 4 | 10 | 21 | 25 | 23 | 16 | 7 | 263 | 258 | 219 | 225 | 232 | 212 | 195 |
| 60 | 10 | 10 | 31 | 27 | 14 | 9 | 7 | 165 | 35 | 353 | 330 | 298 | 265 | 232 | 5 | 12 | 25 | 32 | 28 | 19 | 8 | 261 | 249 | 217 | 222 | 228 | 212 | 203 |
| 64 | 15 | 10 | 35 | 31 | 17 | 10 | 9 | 209 | 309 | 327 | 307 | 270 | 228 | 199 | 6 | 14 | 29 | 37 | 34 | 21 | 9 | 253 | 236 | 214 | 219 | 223 | 209 | 205 |
| 68 | 24 | 21 | 39 | 36 | 20 | 14 | 12 | 222 | 273 | 308 | 294 | 255 | 208 | 181 | 6 | 16 | 32 | 41 | 39 | 23 | 9 | 252 | 224 | 211 | 215 | 218 | 205 | 205 |
| 72 | 35 | 34 | 44 | 41 | 24 | 16 | 15 | 226 | 259 | 295 | 286 | 248 | 202 | 176 | 7 | 20 | 34 | 44 | 42 | 25 | 10 | 249 | 214 | 206 | 211 | 213 | 200 | 201 |
| 76 | 43 | 44 | 47 | 44 | 26 | 18 | 17 | 227 | 249 | 285 | 282 | 245 | 205 | 179 | 6 | 22 | 35 | 45 | 43 | 26 | 11 | 248 | 206 | 201 | 204 | 207 | 192 | 196 |
| 80 | 53 | 54 | 48 | 47 | 29 | 19 | 18 | 225 | 242 | 277 | 278 | 245 | 213 | 186 | 6 | 24 | 36 | 47 | 44 | 29 | 12 | 251 | 200 | 195 | 201 | 201 | 186 | 192 |

**SEPTEMBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 25 | 55 | 69 | 50 | 26 | 12 | 6 | 256 | 225 | 213 | 208 | 203 | 192 | 176 | 3 | 11 | 17 | 10 | 5 | 2 | 1 | 235 | 310 | 321 | 317 | 351 | 16 | 29 |
| 20 | 22 | 52 | 62 | 44 | 24 | 11 | 5 | 225 | 207 | 200 | 197 | 192 | 182 | 173 | 2 | 9 | 16 | 10 | 4 | 2 | 1 | 241 | 321 | 325 | 319 | 350 | 16 | 31 |
| 24 | 23 | 48 | 55 | 38 | 21 | 10 | 5 | 140 | 162 | 165 | 163 | 161 | 160 | 175 | 2 | 8 | 13 | 8 | 4 | 2 | 2 | 353 | 348 | 333 | 319 | 346 | 19 | 36 |
| 28 | 33 | 52 | 59 | 42 | 21 | 8 | 4 | 104 | 127 | 133 | 130 | 131 | 143 | 189 | 2 | 8 | 10 | 7 | 3 | 1 | 2 | 355 | 353 | 332 | 314 | 337 | 24 | 43 |
| 32 | 43 | 57 | 62 | 46 | 21 | 5 | 5 | 88 | 105 | 113 | 109 | 106 | 136 | 214 | 2 | 7 | 9 | 6 | 3 | 1 | 2 | 352 | 352 | 325 | 305 | 324 | 37 | 50 |
| 36 | 51 | 62 | 60 | 44 | 18 | 1 | 7 | 79 | 90 | 98 | 94 | 84 | 202 | 229 | 2 | 7 | 9 | 6 | 3 | 1 | 2 | 345 | 347 | 318 | 300 | 318 | 56 | 57 |
| 40 | 57 | 65 | 54 | 36 | 14 | 6 | 9 | 72 | 79 | 87 | 80 | 55 | 277 | 236 | 2 | 7 | 10 | 7 | 3 | 1 | 2 | 334 | 343 | 314 | 303 | 322 | 66 | 63 |
| 44 | 61 | 66 | 46 | 28 | 12 | 10 | 11 | 68 | 72 | 76 | 66 | 20 | 278 | 238 | 2 | 8 | 12 | 7 | 4 | 1 | 2 | 327 | 337 | 312 | 308 | 332 | 65 | 68 |
| 48 | 62 | 63 | 40 | 24 | 14 | 14 | 12 | 63 | 64 | 66 | 50 | 356 | 279 | 240 | 2 | 9 | 13 | 8 | 4 | 1 | 2 | 322 | 333 | 310 | 311 | 341 | 62 | 69 |
| 52 | 61 | 60 | 35 | 23 | 17 | 16 | 13 | 57 | 54 | 48 | 29 | 343 | 281 | 241 | 2 | 10 | 14 | 8 | 4 | 2 | 2 | 328 | 327 | 306 | 309 | 351 | 61 | 61 |
| 56 | 60 | 60 | 36 | 26 | 22 | 17 | 14 | 49 | 41 | 25 | 6 | 336 | 284 | 242 | 2 | 11 | 15 | 8 | 3 | 2 | 1 | 337 | 324 | 301 | 303 | 359 | 63 | 50 |
| 60 | 60 | 64 | 44 | 34 | 26 | 19 | 14 | 39 | 27 | 3 | 348 | 330 | 282 | 240 | 2 | 11 | 16 | 8 | 2 | 2 | 1 | 346 | 321 | 298 | 293 | 360 | 66 | 58 |
| 64 | 57 | 67 | 51 | 40 | 29 | 19 | 15 | 28 | 15 | 349 | 337 | 324 | 277 | 236 | 1 | 11 | 16 | 9 | 1 | 3 | 2 | 344 | 317 | 294 | 285 | 317 | 68 | 89 |
| 68 | 55 | 70 | 57 | 45 | 31 | 20 | 15 | 18 | 5 | 340 | 329 | 318 | 270 | 230 | 1 | 11 | 17 | 11 | 2 | 3 | 2 | 318 | 313 | 292 | 280 | 259 | 70 | 100 |
| 72 | 52 | 69 | 60 | 47 | 32 | 21 | 15 | 9 | 358 | 334 | 324 | 313 | 263 | 227 | 1 | 10 | 17 | 12 | 3 | 3 | 3 | 219 | 306 | 289 | 277 | 251 | 72 | 102 |
| 76 | 47 | 66 | 58 | 47 | 33 | 23 | 16 | 2 | 353 | 329 | 320 | 309 | 260 | 227 | 2 | 10 | 18 | 14 | 4 | 2 | 3 | 194 | 301 | 288 | 278 | 252 | 75 | 93 |
| 80 | 45 | 62 | 58 | 47 | 35 | 25 | 16 | 355 | 348 | 325 | 317 | 305 | 258 | 229 | 3 | 10 | 19 | 15 | 5 | 2 | 2 | 186 | 294 | 287 | 278 | 252 | 79 | 68 |

**OCTOBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 38 | 60 | 58 | 36 | 18 | 8 | 4 | 218 | 211 | 206 | 204 | 197 | 174 | 151 | 5 | 11 | 12 | 9 | 6 | 3 | 1 | 122 | 103 | 75 | 82 | 87 | 77 | 331 |
| 20 | 42 | 64 | 61 | 37 | 19 | 8 | 4 | 207 | 201 | 196 | 195 | 189 | 170 | 154 | 4 | 9 | 11 | 8 | 5 | 2 | 1 | 117 | 100 | 72 | 82 | 88 | 79 | 347 |
| 24 | 46 | 73 | 70 | 42 | 21 | 9 | 4 | 187 | 183 | 179 | 175 | 171 | 162 | 165 | 1 | 6 | 10 | 6 | 3 | 1 | 0 | 62 | 82 | 65 | 81 | 90 | 91 | 64 |
| 28 | 45 | 75 | 76 | 48 | 23 | 9 | 4 | 174 | 171 | 166 | 160 | 155 | 155 | 181 | 2 | 6 | 11 | 6 | 1 | 0 | 1 | 7 | 61 | 59 | 77 | 84 | 201 | 96 |
| 32 | 42 | 72 | 75 | 49 | 23 | 7 | 4 | 166 | 164 | 158 | 149 | 142 | 148 | 200 | 2 | 8 | 13 | 7 | 1 | 1 | 1 | 6 | 59 | 61 | 74 | 39 | 230 | 113 |
| 36 | 38 | 64 | 66 | 43 | 20 | 5 | 4 | 161 | 161 | 154 | 140 | 129 | 141 | 215 | 2 | 10 | 16 | 9 | 1 | 1 | 1 | 26 | 65 | 66 | 75 | 41 | 230 | 123 |
| 40 | 34 | 55 | 55 | 35 | 16 | 3 | 5 | 158 | 159 | 150 | 132 | 113 | 133 | 224 | 2 | 12 | 19 | 11 | 2 | 1 | 1 | 52 | 71 | 71 | 77 | 54 | 224 | 132 |
| 44 | 31 | 47 | 42 | 26 | 12 | 1 | 6 | 155 | 158 | 148 | 122 | 93 | 106 | 230 | 2 | 15 | 22 | 13 | 3 | 1 | 1 | 73 | 75 | 74 | 77 | 61 | 204 | 140 |
| 48 | 27 | 39 | 32 | 19 | 11 | 1 | 7 | 153 | 158 | 145 | 105 | 67 | 320 | 235 | 2 | 16 | 23 | 14 | 4 | 1 | 1 | 81 | 78 | 75 | 77 | 63 | 156 | 145 |
| 52 | 23 | 29 | 20 | 15 | 10 | 3 | 8 | 150 | 158 | 140 | 80 | 40 | 299 | 239 | 2 | 17 | 23 | 14 | 4 | 1 | 0 | 85 | 81 | 75 | 77 | 67 | 125 | 138 |
| 56 | 18 | 20 | 11 | 13 | 9 | 3 | 8 | 144 | 158 | 128 | 47 | 17 | 274 | 240 | 2 | 17 | 23 | 14 | 4 | 2 | 0 | 83 | 82 | 74 | 78 | 71 | 117 | 16 |
| 60 | 14 | 12 | 2 | 12 | 7 | 5 | 9 | 138 | 160 | 78 | 20 | 354 | 239 | 234 | 2 | 18 | 24 | 14 | 4 | 2 | 0 | 78 | 83 | 74 | 79 | 75 | 111 | 61 |
| 64 | 10 | 8 | 2 | 10 | 5 | 7 | 9 | 140 | 175 | 316 | 358 | 327 | 218 | 223 | 1 | 18 | 24 | 14 | 4 | 2 | 0 | 67 | 82 | 74 | 82 | 76 | 96 | 88 |
| 68 | 8 | 8 | 6 | 8 | 4 | 9 | 9 | 155 | 199 | 276 | 332 | 292 | 207 | 209 | 2 | 19 | 25 | 14 | 4 | 2 | 1 | 61 | 80 | 78 | 85 | 76 | 62 | 75 |
| 72 | 8 | 11 | 9 | 7 | 5 | 11 | 9 | 180 | 209 | 250 | 305 | 272 | 204 | 198 | 3 | 19 | 26 | 14 | 4 | 3 | 2 | 56 | 79 | 80 | 87 | 74 | 43 | 41 |
| 76 | 12 | 16 | 13 | 7 | 5 | 11 | 9 | 194 | 211 | 237 | 286 | 274 | 204 | 189 | 5 | 20 | 28 | 15 | 5 | 5 | 4 | 53 | 78 | 81 | 89 | 72 | 40 | 26 |
| 80 | 16 | 21 | 17 | 7 | 5 | 10 | 8 | 197 | 212 | 232 | 276 | 291 | 209 | 179 | 8 | 20 | 30 | 16 | 6 | 8 | 7 | 51 | 77 | 82 | 90 | 70 | 42 | 20 |

**NOVEMBER**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 12 | 21 | 24 | 20 | 10 | 5 | 5 | 222 | 225 | 216 | 209 | 185 | 134 | 114 | 2 | 5 | 3 | 3 | 3 | 2 | 0 | 212 | 209 | 214 | 195 | 133 | 101 | 290 |
| 20 | 13 | 20 | 23 | 18 | 10 | 4 | 4 | 202 | 204 | 198 | 193 | 175 | 137 | 122 | 2 | 4 | 3 | 3 | 3 | 2 | 0 | 216 | 211 | 211 | 195 | 143 | 112 | 188 |
| 24 | 17 | 24 | 25 | 19 | 9 | 4 | 3 | 175 | 167 | 160 | 157 | 153 | 147 | 150 | 2 | 3 | 3 | 3 | 3 | 1 | 1 | 227 | 216 | 201 | 196 | 170 | 144 | 136 |
| 28 | 17 | 25 | 27 | 20 | 9 | 3 | 3 | 163 | 150 | 138 | 134 | 140 | 160 | 173 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 234 | 215 | 184 | 189 | 189 | 160 | 134 |
| 32 | 13 | 20 | 23 | 18 | 7 | 3 | 3 | 158 | 139 | 125 | 121 | 134 | 174 | 184 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 233 | 194 | 164 | 179 | 192 | 175 | 132 |
| 36 | 7 | 11 | 15 | 11 | 4 | 3 | 3 | 154 | 126 | 108 | 110 | 143 | 185 | 185 | 2 | 2 | 4 | 4 | 4 | 2 | 2 | 227 | 158 | 147 | 160 | 187 | 176 | 132 |
| 40 | 1 | 4 | 7 | 4 | 2 | 3 | 3 | 347 | 26 | 59 | 82 | 191 | 190 | 183 | 2 | 3 | 5 | 5 | 4 | 2 | 2 | 219 | 139 | 135 | 160 | 178 | 172 | 132 |
| 44 | 7 | 12 | 10 | 4 | 3 | 3 | 3 | 331 | 334 | 349 | 333 | 241 | 192 | 179 | 2 | 3 | 6 | 5 | 4 | 2 | 2 | 213 | 131 | 129 | 155 | 169 | 166 | 131 |
| 48 | 11 | 20 | 16 | 8 | 4 | 3 | 2 | 329 | 327 | 332 | 312 | 253 | 192 | 180 | 3 | 4 | 6 | 6 | 5 | 2 | 2 | 212 | 130 | 128 | 152 | 166 | 162 | 134 |
| 52 | 14 | 24 | 20 | 10 | 5 | 3 | 2 | 326 | 324 | 327 | 306 | 259 | 192 | 192 | 3 | 4 | 6 | 7 | 5 | 3 | 2 | 213 | 133 | 130 | 152 | 167 | 162 | 141 |
| 56 | 15 | 26 | 22 | 12 | 5 | 3 | 1 | 324 | 322 | 324 | 301 | 260 | 188 | 218 | 3 | 4 | 7 | 7 | 6 | 3 | 2 | 214 | 136 | 132 | 152 | 170 | 164 | 147 |
| 60 | 16 | 27 | 23 | 13 | 5 | 4 | 1 | 321 | 320 | 321 | 296 | 258 | 181 | 247 | 4 | 4 | 8 | 8 | 7 | 3 | 3 | 215 | 139 | 131 | 150 | 171 | 164 | 147 |
| 64 | 18 | 29 | 23 | 13 | 5 | 4 | 0 | 318 | 317 | 317 | 289 | 243 | 172 | 324 | 4 | 5 | 9 | 8 | 6 | 3 | 3 | 215 | 139 | 127 | 146 | 166 | 159 | 140 |
| 68 | 18 | 29 | 23 | 13 | 4 | 4 | 1 | 314 | 314 | 312 | 280 | 225 | 167 | 35 | 5 | 5 | 10 | 9 | 6 | 4 | 3 | 214 | 134 | 121 | 141 | 154 | 149 | 129 |
| 72 | 19 | 30 | 22 | 12 | 4 | 4 | 2 | 311 | 311 | 307 | 272 | 206 | 166 | 54 | 5 | 6 | 11 | 9 | 6 | 4 | 4 | 213 | 128 | 116 | 136 | 136 | 133 | 123 |
| 76 | 20 | 32 | 23 | 12 | 4 | 3 | 2 | 310 | 309 | 303 | 245 | 197 | 173 | 67 | 5 | 8 | 13 | 10 | 6 | 5 | 4 | 212 | 120 | 112 | 133 | 118 | 115 | 121 |
| 80 | 20 | 34 | 23 | 13 | 4 | 3 | 2 | 307 | 308 | 299 | 261 | 195 | 194 | 80 | 6 | 9 | 15 | 11 | 7 | 5 | 4 | 210 | 113 | 109 | 131 | 104 | 98 | 123 |

N HEMISPHERE    AMPLITUDE (0.1%) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF PRESSURE/(ZONAL MEAN PRESSURE) - 1

| KM LAT= | WAVE 1 AMPLITUDE (0.1%) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1%) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| **SEPTEMBER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 5 | 7 | 6 | 6 | 4 | 2 | 0 | 154 | 166 | 206 | 234 | 209 | 185 | 68 | 2 | 1 | 1 | 6 | 8 | 6 | 2 | 171 | 188 | 350 | 35 | 39 | 38 | 23 |
| 20 | 4 | 6 | 6 | 6 | 4 | 2 | 1 | 161 | 172 | 204 | 229 | 217 | 211 | 259 | 1 | 1 | 2 | 5 | 7 | 6 | 2 | 170 | 191 | 354 | 30 | 32 | 33 | 21 |
| 24 | 4 | 5 | 6 | 6 | 5 | 4 | 2 | 180 | 189 | 201 | 216 | 226 | 239 | 257 | 0 | 1 | 2 | 4 | 6 | 5 | 2 | 67 | 350 | 360 | 12 | 14 | 17 | 18 |
| 28 | 4 | 5 | 5 | 5 | 6 | 6 | 4 | 200 | 208 | 199 | 201 | 224 | 240 | 256 | 1 | 2 | 2 | 3 | 4 | 3 | 1 | 359 | 352 | 5 | 349 | 343 | 347 | 12 |
| 32 | 4 | 5 | 5 | 6 | 6 | 6 | 4 | 212 | 221 | 200 | 188 | 212 | 233 | 255 | 2 | 3 | 3 | 2 | 3 | 3 | 1 | 357 | 357 | 9 | 327 | 304 | 307 | 356 |
| 36 | 4 | 6 | 5 | 6 | 7 | 6 | 4 | 216 | 227 | 203 | 180 | 192 | 214 | 254 | 3 | 4 | 3 | 1 | 3 | 3 | 0 | 356 | 357 | 12 | 313 | 267 | 269 | 241 |
| 40 | 4 | 6 | 5 | 6 | 7 | 6 | 2 | 214 | 228 | 208 | 174 | 172 | 186 | 249 | 3 | 5 | 3 | 0 | 3 | 3 | 1 | 355 | 357 | 15 | 84 | 234 | 242 | 206 |
| 44 | 4 | 6 | 4 | 5 | 8 | 6 | 1 | 210 | 226 | 212 | 170 | 156 | 160 | 234 | 3 | 5 | 4 | 1 | 3 | 4 | 1 | 355 | 356 | 18 | 103 | 205 | 222 | 198 |
| 48 | 4 | 5 | 4 | 5 | 8 | 6 | 0 | 208 | 225 | 215 | 165 | 145 | 144 | 27 | 3 | 5 | 4 | 2 | 4 | 4 | 1 | 358 | 358 | 19 | 98 | 188 | 209 | 200 |
| 52 | 5 | 5 | 3 | 4 | 8 | 6 | 1 | 210 | 223 | 220 | 160 | 138 | 133 | 7 | 3 | 5 | 4 | 3 | 4 | 4 | 2 | 2 | 0 | 20 | 94 | 174 | 201 | 209 |
| 56 | 6 | 6 | 2 | 4 | 7 | 5 | 2 | 218 | 227 | 232 | 165 | 139 | 128 | 347 | 3 | 5 | 4 | 4 | 4 | 5 | 2 | 2 | 3 | 21 | 96 | 164 | 198 | 226 |
| 60 | 6 | 7 | 3 | 4 | 6 | 4 | 3 | 227 | 234 | 248 | 186 | 148 | 128 | 341 | 3 | 5 | 4 | 5 | 5 | 4 | 2 | 354 | 5 | 23 | 98 | 156 | 198 | 243 |
| 64 | 7 | 9 | 4 | 4 | 5 | 3 | 4 | 234 | 241 | 252 | 208 | 162 | 134 | 342 | 4 | 5 | 5 | 6 | 4 | 4 | 3 | 346 | 7 | 28 | 100 | 146 | 199 | 252 |
| 68 | 8 | 11 | 6 | 4 | 5 | 3 | 4 | 235 | 244 | 254 | 225 | 174 | 142 | 352 | 5 | 5 | 5 | 7 | 4 | 2 | 2 | 343 | 12 | 33 | 102 | 136 | 202 | 259 |
| 72 | 9 | 12 | 7 | 4 | 4 | 4 | 4 | 230 | 244 | 256 | 237 | 173 | 146 | 13 | 5 | 5 | 5 | 7 | 4 | 0 | 2 | 347 | 22 | 38 | 102 | 124 | 200 | 271 |
| 76 | 9 | 13 | 8 | 2 | 3 | 5 | 6 | 220 | 243 | 261 | 257 | 147 | 143 | 34 | 4 | 5 | 5 | 7 | 4 | 2 | 1 | 2 | 35 | 44 | 100 | 109 | 31 | 15 |
| 80 | 10 | 13 | 8 | 2 | 4 | 7 | 8 | 207 | 239 | 269 | 337 | 107 | 141 | 47 | 4 | 6 | 5 | 8 | 4 | 4 | 3 | 26 | 48 | 50 | 98 | 96 | 32 | 59 |
| **OCTOBER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 7 | 9 | 8 | 10 | 12 | 13 | 11 | 150 | 161 | 207 | 281 | 302 | 320 | 325 | 2 | 2 | 3 | 8 | 12 | 11 | 5 | 223 | 279 | 2 | 26 | 18 | 6 | 358 |
| 20 | 6 | 8 | 8 | 10 | 13 | 13 | 11 | 154 | 167 | 207 | 266 | 282 | 299 | 311 | 1 | 1 | 4 | 8 | 13 | 12 | 5 | 232 | 301 | 358 | 15 | 12 | 4 | 359 |
| 24 | 4 | 5 | 8 | 12 | 17 | 17 | 11 | 172 | 182 | 200 | 227 | 241 | 251 | 269 | 1 | 2 | 4 | 9 | 14 | 14 | 6 | 4 | 356 | 348 | 354 | 358 | 359 | 358 |
| 28 | 3 | 3 | 6 | 16 | 26 | 27 | 15 | 212 | 217 | 173 | 185 | 200 | 208 | 215 | 2 | 2 | 5 | 11 | 16 | 15 | 6 | 16 | 10 | 340 | 339 | 345 | 351 | 353 |
| 32 | 3 | 2 | 8 | 26 | 42 | 45 | 27 | 258 | 293 | 125 | 152 | 168 | 177 | 179 | 3 | 3 | 5 | 12 | 17 | 15 | 6 | 16 | 15 | 334 | 328 | 335 | 341 | 343 |
| 36 | 5 | 5 | 13 | 39 | 64 | 70 | 43 | 278 | 335 | 98 | 133 | 148 | 158 | 159 | 3 | 3 | 4 | 11 | 17 | 15 | 7 | 12 | 13 | 328 | 319 | 324 | 328 | 331 |
| 40 | 6 | 7 | 18 | 50 | 83 | 90 | 55 | 288 | 351 | 86 | 121 | 137 | 146 | 148 | 2 | 3 | 4 | 10 | 16 | 15 | 7 | 6 | 8 | 323 | 310 | 313 | 312 | 318 |
| 44 | 7 | 9 | 23 | 58 | 95 | 101 | 60 | 294 | 358 | 79 | 113 | 130 | 138 | 141 | 2 | 2 | 3 | 8 | 14 | 15 | 7 | 360 | 3 | 320 | 302 | 301 | 297 | 306 |
| 48 | 8 | 10 | 26 | 63 | 100 | 104 | 61 | 297 | 360 | 74 | 107 | 124 | 132 | 135 | 2 | 2 | 3 | 7 | 13 | 14 | 7 | 358 | 356 | 321 | 298 | 291 | 284 | 299 |
| 52 | 9 | 12 | 28 | 67 | 104 | 106 | 61 | 298 | 359 | 71 | 103 | 120 | 127 | 130 | 2 | 2 | 3 | 6 | 11 | 14 | 7 | 2 | 349 | 321 | 294 | 280 | 272 | 297 |
| 56 | 11 | 13 | 31 | 70 | 104 | 103 | 60 | 300 | 358 | 67 | 99 | 116 | 124 | 126 | 2 | 2 | 4 | 6 | 10 | 14 | 8 | 2 | 334 | 325 | 292 | 269 | 263 | 299 |
| 60 | 12 | 15 | 32 | 69 | 99 | 93 | 57 | 303 | 359 | 62 | 94 | 113 | 122 | 124 | 2 | 3 | 4 | 5 | 8 | 13 | 7 | 352 | 323 | 326 | 294 | 260 | 261 | 302 |
| 64 | 12 | 16 | 33 | 65 | 93 | 82 | 55 | 307 | 359 | 55 | 89 | 110 | 122 | 124 | 3 | 3 | 4 | 4 | 7 | 12 | 7 | 343 | 321 | 332 | 307 | 260 | 267 | 306 |
| 68 | 12 | 16 | 32 | 60 | 84 | 71 | 51 | 309 | 358 | 48 | 85 | 108 | 124 | 124 | 4 | 3 | 5 | 5 | 6 | 11 | 5 | 337 | 325 | 335 | 322 | 270 | 279 | 309 |
| 72 | 11 | 15 | 30 | 54 | 77 | 62 | 48 | 307 | 352 | 42 | 81 | 107 | 128 | 126 | 3 | 3 | 5 | 6 | 5 | 11 | 3 | 335 | 335 | 336 | 329 | 290 | 292 | 311 |
| 76 | 9 | 13 | 27 | 49 | 71 | 54 | 44 | 297 | 338 | 37 | 79 | 108 | 134 | 129 | 1 | 2 | 6 | 7 | 6 | 12 | 0 | 342 | 2 | 335 | 330 | 314 | 303 | 175 |
| 80 | 8 | 11 | 23 | 45 | 66 | 50 | 40 | 277 | 314 | 33 | 80 | 109 | 142 | 133 | 1 | 2 | 7 | 8 | 8 | 13 | 4 | 134 | 64 | 332 | 326 | 326 | 311 | 139 |
| **NOVEMBER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 10 | 14 | 13 | 20 | 26 | 23 | 15 | 137 | 170 | 225 | 270 | 273 | 278 | 273 | 2 | 3 | 8 | 13 | 17 | 14 | 7 | 255 | 320 | 16 | 30 | 26 | 17 | 14 |
| 20 | 8 | 13 | 13 | 21 | 32 | 31 | 21 | 141 | 170 | 214 | 252 | 257 | 260 | 258 | 1 | 3 | 7 | 13 | 18 | 16 | 7 | 272 | 328 | 6 | 18 | 19 | 15 | 17 |
| 24 | 4 | 8 | 14 | 30 | 51 | 57 | 40 | 147 | 162 | 183 | 215 | 229 | 236 | 239 | 1 | 3 | 7 | 14 | 21 | 18 | 7 | 360 | 339 | 340 | 353 | 5 | 12 | 23 |
| 28 | 1 | 5 | 19 | 46 | 78 | 87 | 59 | 53 | 106 | 152 | 192 | 210 | 220 | 225 | 2 | 3 | 7 | 16 | 23 | 20 | 8 | 35 | 350 | 315 | 333 | 354 | 10 | 30 |
| 32 | 5 | 10 | 27 | 63 | 104 | 110 | 72 | 6 | 62 | 132 | 177 | 196 | 206 | 212 | 2 | 1 | 6 | 15 | 23 | 21 | 9 | 55 | 10 | 290 | 318 | 347 | 9 | 32 |
| 36 | 10 | 16 | 32 | 75 | 121 | 125 | 78 | 8 | 51 | 119 | 166 | 185 | 194 | 199 | 2 | 1 | 4 | 12 | 21 | 21 | 9 | 74 | 80 | 260 | 304 | 341 | 5 | 25 |
| 40 | 13 | 21 | 35 | 78 | 127 | 129 | 79 | 9 | 46 | 111 | 159 | 177 | 184 | 188 | 2 | 2 | 3 | 9 | 18 | 20 | 9 | 89 | 105 | 213 | 285 | 333 | 356 | 15 |
| 44 | 16 | 23 | 35 | 77 | 128 | 127 | 76 | 10 | 42 | 103 | 154 | 171 | 177 | 182 | 2 | 3 | 4 | 5 | 14 | 17 | 9 | 93 | 100 | 160 | 256 | 325 | 349 | 9 |
| 48 | 18 | 25 | 34 | 76 | 128 | 126 | 73 | 9 | 37 | 96 | 149 | 165 | 172 | 176 | 2 | 4 | 5 | 3 | 11 | 15 | 8 | 87 | 89 | 130 | 209 | 320 | 343 | 6 |
| 52 | 19 | 26 | 34 | 77 | 129 | 125 | 69 | 7 | 31 | 88 | 143 | 159 | 166 | 170 | 2 | 5 | 6 | 4 | 9 | 14 | 8 | 77 | 76 | 111 | 164 | 314 | 338 | 3 |
| 56 | 19 | 26 | 35 | 78 | 128 | 122 | 65 | 6 | 27 | 81 | 136 | 152 | 160 | 164 | 2 | 6 | 7 | 5 | 9 | 14 | 7 | 64 | 61 | 99 | 152 | 307 | 332 | 354 |
| 60 | 17 | 23 | 33 | 75 | 122 | 114 | 59 | 6 | 25 | 76 | 129 | 146 | 154 | 158 | 1 | 6 | 7 | 5 | 9 | 14 | 7 | 28 | 41 | 84 | 156 | 296 | 327 | 346 |
| 64 | 13 | 19 | 29 | 70 | 111 | 105 | 54 | 4 | 20 | 72 | 124 | 140 | 148 | 152 | 1 | 7 | 6 | 3 | 8 | 15 | 7 | 328 | 23 | 63 | 165 | 294 | 325 | 332 |
| 68 | 9 | 15 | 25 | 62 | 97 | 94 | 49 | 358 | 12 | 68 | 119 | 135 | 143 | 148 | 2 | 8 | 7 | 1 | 8 | 15 | 7 | 310 | 14 | 45 | 188 | 296 | 328 | 325 |
| 72 | 7 | 13 | 20 | 53 | 84 | 82 | 43 | 343 | 360 | 60 | 115 | 130 | 139 | 145 | 1 | 9 | 7 | 1 | 8 | 16 | 7 | 342 | 15 | 35 | 305 | 303 | 332 | 321 |
| 76 | 8 | 14 | 18 | 43 | 70 | 70 | 38 | 326 | 349 | 48 | 113 | 128 | 136 | 143 | 2 | 9 | 8 | 3 | 8 | 16 | 7 | 61 | 25 | 36 | 354 | 314 | 337 | 321 |
| 80 | 10 | 17 | 17 | 34 | 57 | 58 | 32 | 318 | 344 | 33 | 110 | 126 | 135 | 141 | 5 | 9 | 9 | 4 | 9 | 15 | 8 | 80 | 40 | 40 | 9 | 322 | 343 | 324 |
| **DECEMBER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 12 | 14 | 16 | 24 | 20 | 11 | 7 | 145 | 186 | 265 | 299 | 298 | 268 | 218 | 3 | 6 | 9 | 14 | 22 | 18 | 8 | 292 | 307 | 353 | 30 | 37 | 34 | 18 |
| 20 | 10 | 13 | 16 | 23 | 28 | 26 | 17 | 144 | 183 | 240 | 265 | 256 | 240 | 228 | 2 | 4 | 8 | 15 | 24 | 21 | 9 | 310 | 318 | 360 | 29 | 35 | 36 | 30 |
| 24 | 4 | 9 | 22 | 43 | 66 | 66 | 41 | 135 | 167 | 194 | 212 | 220 | 222 | 224 | 2 | 3 | 7 | 18 | 30 | 27 | 11 | 357 | 359 | 15 | 27 | 32 | 39 | 43 |
| 28 | 3 | 7 | 29 | 67 | 103 | 103 | 62 | 29 | 111 | 163 | 189 | 204 | 209 | 212 | 2 | 4 | 9 | 23 | 36 | 33 | 12 | 10 | 12 | 13 | 23 | 30 | 39 | 41 |
| 32 | 7 | 12 | 35 | 84 | 125 | 120 | 70 | 8 | 65 | 136 | 171 | 190 | 195 | 199 | 2 | 4 | 12 | 29 | 42 | 35 | 12 | 359 | 352 | 359 | 16 | 27 | 33 | 24 |
| 36 | 10 | 19 | 40 | 91 | 128 | 122 | 73 | 7 | 48 | 111 | 154 | 176 | 182 | 186 | 3 | 6 | 17 | 34 | 45 | 33 | 12 | 335 | 327 | 345 | 7 | 21 | 22 | 2 |
| 40 | 11 | 23 | 44 | 89 | 121 | 117 | 73 | 7 | 39 | 91 | 137 | 162 | 169 | 176 | 3 | 9 | 22 | 35 | 42 | 29 | 13 | 315 | 313 | 336 | 359 | 13 | 8 | 345 |
| 44 | 12 | 26 | 47 | 84 | 112 | 110 | 72 | 6 | 30 | 75 | 123 | 150 | 159 | 169 | 4 | 12 | 26 | 35 | 36 | 25 | 13 | 305 | 307 | 332 | 354 | 8 | 358 | 338 |
| 48 | 12 | 28 | 47 | 80 | 104 | 104 | 69 | 3 | 22 | 64 | 113 | 140 | 152 | 164 | 5 | 13 | 28 | 34 | 32 | 23 | 13 | 302 | 305 | 330 | 349 | 4 | 353 | 338 |
| 52 | 12 | 29 | 48 | 77 | 100 | 101 | 67 | 356 | 13 | 53 | 104 | 133 | 145 | 159 | 5 | 14 | 30 | 33 | 29 | 21 | 13 | 305 | 306 | 329 | 347 | 2 | 352 | 342 |
| 56 | 12 | 30 | 48 | 74 | 96 | 99 | 65 | 348 | 3 | 43 | 95 | 125 | 140 | 155 | 5 | 14 | 30 | 32 | 26 | 21 | 14 | 310 | 308 | 331 | 348 | 1 | 352 | 345 |
| 60 | 11 | 31 | 48 | 67 | 89 | 94 | 63 | 338 | 352 | 33 | 88 | 119 | 136 | 152 | 5 | 15 | 31 | 30 | 24 | 20 | 15 | 313 | 311 | 333 | 350 | 3 | 355 | 349 |
| 64 | 11 | 31 | 47 | 58 | 78 | 87 | 59 | 327 | 342 | 22 | 80 | 115 | 133 | 149 | 5 | 15 | 31 | 29 | 23 | 20 | 16 | 315 | 314 | 333 | 355 | 8 | 359 | 351 |
| 68 | 11 | 31 | 47 | 48 | 66 | 77 | 54 | 316 | 332 | 14 | 72 | 112 | 132 | 148 | 6 | 15 | 32 | 30 | 24 | 21 | 16 | 315 | 319 | 334 | 359 | 14 | 5 | 354 |
| 72 | 11 | 33 | 48 | 40 | 53 | 67 | 49 | 307 | 326 | 9 | 66 | 111 | 134 | 148 | 6 | 16 | 34 | 31 | 26 | 21 | 15 | 318 | 325 | 334 | 4 | 20 | 8 | 355 |
| 76 | 12 | 35 | 48 | 31 | 40 | 57 | 44 | 303 | 324 | 6 | 59 | 114 | 138 | 150 | 6 | 16 | 35 | 34 | 30 | 22 | 15 | 322 | 332 | 335 | 7 | 24 | 11 | 357 |
| 80 | 13 | 37 | 49 | 24 | 28 | 47 | 38 | 300 | 324 | 5 | 54 | 125 | 146 | 154 | 6 | 17 | 37 | 36 | 34 | 23 | 13 | 327 | 340 | 337 | 11 | 28 | 12 | 357 |

116

| KM LAT= | WAVE 1 AMPLITUDE (0.1%) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1%) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |

**JANUARY**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 8 | 10 | 11 | 10 | 10 | 4 | 1 | 164 | 199 | 257 | 248 | 207 | 206 | 115 | 3 | 4 | 6 | 21 | 35 | 28 | 12 | 290 | 293 | 10 | 36 | 35 | 30 | 29 |
| 20 | 7 | 10 | 12 | 18 | 30 | 28 | 16 | 164 | 193 | 226 | 209 | 193 | 192 | 193 | 2 | 4 | 8 | 23 | 40 | 34 | 14 | 302 | 310 | 5 | 26 | 27 | 24 | 26 |
| 24 | 4 | 9 | 20 | 44 | 76 | 84 | 55 | 161 | 177 | 189 | 188 | 185 | 187 | 190 | 2 | 5 | 12 | 30 | 50 | 46 | 19 | 343 | 345 | 357 | 9 | 13 | 16 | 22 |
| 28 | 1 | 6 | 25 | 64 | 113 | 128 | 84 | 112 | 152 | 171 | 178 | 180 | 182 | 185 | 2 | 7 | 17 | 37 | 59 | 53 | 21 | 1 | 350 | 349 | 357 | 4 | 10 | 17 |
| 32 | 3 | 5 | 25 | 73 | 134 | 150 | 97 | 1 | 88 | 152 | 169 | 174 | 177 | 179 | 3 | 9 | 22 | 43 | 62 | 55 | 21 | 350 | 342 | 342 | 349 | 357 | 4 | 11 |
| 36 | 5 | 10 | 22 | 72 | 138 | 154 | 101 | 357 | 43 | 120 | 156 | 167 | 171 | 173 | 3 | 10 | 25 | 45 | 59 | 50 | 19 | 329 | 329 | 335 | 342 | 351 | 358 | 4 |
| 40 | 6 | 15 | 24 | 64 | 128 | 146 | 100 | 355 | 29 | 81 | 140 | 159 | 164 | 166 | 4 | 12 | 26 | 42 | 51 | 43 | 17 | 309 | 315 | 327 | 335 | 344 | 351 | 356 |
| 44 | 7 | 20 | 31 | 58 | 115 | 134 | 96 | 354 | 22 | 58 | 121 | 149 | 156 | 159 | 4 | 13 | 26 | 38 | 42 | 35 | 16 | 293 | 303 | 320 | 328 | 337 | 343 | 354 |
| 48 | 7 | 22 | 37 | 55 | 102 | 120 | 88 | 352 | 18 | 48 | 105 | 140 | 149 | 154 | 4 | 13 | 25 | 35 | 37 | 29 | 15 | 282 | 293 | 313 | 322 | 331 | 339 | 0 |
| 52 | 8 | 24 | 42 | 55 | 91 | 105 | 79 | 351 | 16 | 42 | 91 | 131 | 144 | 150 | 5 | 14 | 25 | 34 | 33 | 24 | 14 | 271 | 284 | 308 | 315 | 322 | 335 | 8 |
| 56 | 8 | 24 | 43 | 53 | 80 | 90 | 69 | 349 | 14 | 40 | 82 | 125 | 140 | 148 | 5 | 14 | 24 | 34 | 31 | 20 | 13 | 260 | 276 | 304 | 308 | 311 | 335 | 11 |
| 60 | 8 | 23 | 42 | 47 | 66 | 74 | 59 | 348 | 11 | 38 | 75 | 121 | 139 | 147 | 5 | 14 | 23 | 32 | 29 | 16 | 12 | 251 | 269 | 305 | 301 | 300 | 335 | 8 |
| 64 | 8 | 21 | 38 | 38 | 51 | 59 | 49 | 347 | 7 | 36 | 70 | 122 | 142 | 149 | 5 | 13 | 21 | 29 | 26 | 14 | 9 | 238 | 262 | 306 | 295 | 290 | 337 | 356 |
| 68 | 8 | 19 | 36 | 28 | 39 | 47 | 41 | 345 | 3 | 33 | 69 | 131 | 152 | 154 | 5 | 12 | 19 | 25 | 23 | 12 | 8 | 230 | 257 | 308 | 291 | 284 | 339 | 339 |
| 72 | 8 | 19 | 34 | 20 | 33 | 42 | 36 | 342 | 357 | 29 | 74 | 149 | 166 | 163 | 5 | 11 | 19 | 22 | 21 | 12 | 8 | 222 | 257 | 310 | 291 | 279 | 338 | 318 |
| 76 | 9 | 20 | 34 | 13 | 35 | 44 | 36 | 340 | 353 | 25 | 91 | 170 | 180 | 172 | 4 | 9 | 19 | 20 | 19 | 12 | 8 | 218 | 263 | 311 | 294 | 281 | 338 | 306 |
| 80 | 10 | 23 | 37 | 11 | 43 | 51 | 39 | 339 | 350 | 22 | 127 | 182 | 188 | 178 | 4 | 8 | 21 | 18 | 17 | 12 | 8 | 221 | 276 | 312 | 301 | 282 | 334 | 297 |

**FEBRUARY**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 8 | 7 | 11 | 16 | 18 | 14 | 9 | 161 | 194 | 266 | 273 | 244 | 226 | 228 | 4 | 2 | 8 | 22 | 28 | 26 | 14 | 21 | 349 | 11 | 31 | 36 | 26 | 355 |
| 20 | 7 | 7 | 11 | 19 | 29 | 30 | 20 | 161 | 192 | 246 | 249 | 231 | 220 | 220 | 3 | 3 | 9 | 23 | 34 | 29 | 12 | 37 | 351 | 4 | 27 | 31 | 22 | 10 |
| 24 | 4 | 7 | 14 | 32 | 57 | 66 | 46 | 156 | 184 | 210 | 218 | 216 | 213 | 213 | 4 | 2 | 7 | 21 | 47 | 36 | 12 | 174 | 46 | 30 | 22 | 23 | 19 | 28 |
| 28 | 2 | 6 | 18 | 45 | 79 | 92 | 64 | 148 | 171 | 186 | 199 | 206 | 207 | 207 | 4 | 6 | 13 | 28 | 51 | 38 | 10 | 131 | 352 | 11 | 18 | 15 | 16 | 15 |
| 32 | 1 | 5 | 20 | 53 | 92 | 103 | 72 | 124 | 150 | 167 | 184 | 195 | 200 | 201 | 2 | 4 | 11 | 25 | 46 | 36 | 14 | 134 | 355 | 23 | 15 | 10 | 18 | 344 |
| 36 | 1 | 5 | 20 | 55 | 92 | 103 | 72 | 97 | 117 | 146 | 168 | 182 | 191 | 194 | 1 | 3 | 5 | 17 | 49 | 30 | 14 | 276 | 89 | 72 | 16 | 9 | 1 | 310 |
| 40 | 1 | 5 | 20 | 54 | 88 | 95 | 69 | 89 | 86 | 123 | 152 | 169 | 181 | 186 | 2 | 2 | 6 | 12 | 27 | 20 | 14 | 331 | 354 | 62 | 26 | 4 | 354 | 292 |
| 44 | 1 | 6 | 20 | 52 | 83 | 87 | 63 | 74 | 66 | 104 | 138 | 158 | 168 | 179 | 4 | 5 | 10 | 11 | 26 | 16 | 14 | 321 | 57 | 137 | 53 | 7 | 324 | 281 |
| 48 | 1 | 8 | 23 | 53 | 80 | 79 | 59 | 30 | 53 | 91 | 128 | 146 | 158 | 173 | 2 | 3 | 6 | 11 | 16 | 11 | 15 | 6 | 353 | 81 | 56 | 354 | 318 | 281 |
| 52 | 2 | 10 | 25 | 54 | 73 | 72 | 53 | 17 | 49 | 85 | 120 | 138 | 149 | 169 | 4 | 5 | 12 | 10 | 17 | 10 | 15 | 347 | 71 | 136 | 70 | 7 | 306 | 281 |
| 56 | 3 | 13 | 27 | 52 | 64 | 60 | 47 | 19 | 50 | 83 | 114 | 129 | 142 | 167 | 3 | 2 | 7 | 11 | 15 | 10 | 14 | 45 | 13 | 86 | 67 | 1 | 306 | 279 |
| 60 | 3 | 14 | 28 | 45 | 48 | 46 | 40 | 30 | 57 | 83 | 107 | 119 | 136 | 167 | 3 | 9 | 16 | 13 | 17 | 9 | 14 | 358 | 86 | 129 | 73 | 6 | 311 | 290 |
| 64 | 2 | 13 | 24 | 35 | 32 | 28 | 31 | 40 | 63 | 83 | 99 | 105 | 130 | 168 | 5 | 4 | 14 | 16 | 21 | 11 | 14 | 78 | 72 | 103 | 70 | 9 | 313 | 284 |
| 68 | 1 | 11 | 21 | 24 | 17 | 10 | 23 | 58 | 69 | 81 | 87 | 78 | 122 | 174 | 4 | 12 | 18 | 19 | 21 | 10 | 14 | 22 | 86 | 108 | 64 | 3 | 330 | 305 |
| 72 | 0 | 7 | 15 | 14 | 11 | 6 | 14 | 159 | 70 | 75 | 67 | 9 | 311 | 190 | 6 | 11 | 20 | 21 | 28 | 14 | 13 | 67 | 82 | 108 | 63 | 12 | 319 | 207 |
| 76 | 2 | 4 | 11 | 9 | 18 | 19 | 11 | 234 | 51 | 60 | 25 | 321 | 298 | 228 | 6 | 9 | 17 | 23 | 25 | 12 | 14 | 62 | 75 | 78 | 53 | 1 | 339 | 312 |
| 80 | 3 | 3 | 9 | 10 | 28 | 30 | 13 | 247 | 336 | 27 | 329 | 302 | 292 | 270 | 5 | 15 | 20 | 25 | 34 | 15 | 14 | 31 | 81 | 106 | 53 | 13 | 322 | 285 |

**MARCH**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 8 | 9 | 8 | 13 | 21 | 29 | 25 | 155 | 183 | 259 | 282 | 253 | 235 | 226 | 1 | 1 | 8 | 20 | 31 | 29 | 13 | 305 | 27 | 62 | 51 | 34 | 27 | 21 |
| 20 | 6 | 9 | 10 | 18 | 34 | 44 | 35 | 159 | 186 | 235 | 248 | 236 | 227 | 220 | 1 | 1 | 7 | 18 | 30 | 28 | 12 | 327 | 26 | 51 | 43 | 29 | 23 | 19 |
| 24 | 4 | 7 | 16 | 38 | 67 | 78 | 56 | 170 | 190 | 209 | 221 | 222 | 219 | 215 | 1 | 3 | 6 | 15 | 26 | 24 | 10 | 37 | 29 | 27 | 23 | 17 | 15 | 14 |
| 28 | 1 | 4 | 18 | 51 | 90 | 102 | 70 | 195 | 183 | 190 | 207 | 213 | 214 | 212 | 2 | 3 | 6 | 13 | 22 | 21 | 9 | 56 | 33 | 14 | 8 | 10 | 12 | 16 |
| 32 | 1 | 2 | 16 | 53 | 96 | 107 | 72 | 328 | 92 | 164 | 193 | 204 | 208 | 210 | 2 | 4 | 6 | 11 | 19 | 18 | 9 | 60 | 37 | 19 | 8 | 12 | 15 | 23 |
| 36 | 3 | 6 | 16 | 46 | 86 | 96 | 63 | 348 | 45 | 124 | 173 | 192 | 200 | 207 | 1 | 4 | 6 | 8 | 15 | 15 | 9 | 54 | 42 | 38 | 27 | 22 | 24 | 31 |
| 40 | 4 | 11 | 20 | 41 | 71 | 76 | 49 | 353 | 37 | 91 | 147 | 176 | 189 | 202 | 1 | 4 | 6 | 8 | 12 | 13 | 9 | 35 | 46 | 61 | 61 | 38 | 35 | 40 |
| 44 | 5 | 14 | 26 | 42 | 61 | 59 | 35 | 353 | 33 | 74 | 122 | 156 | 173 | 194 | 1 | 4 | 7 | 10 | 11 | 11 | 9 | 356 | 48 | 75 | 83 | 56 | 47 | 44 |
| 48 | 5 | 16 | 30 | 46 | 56 | 49 | 25 | 350 | 30 | 66 | 106 | 139 | 157 | 184 | 1 | 3 | 7 | 10 | 10 | 10 | 9 | 325 | 46 | 81 | 91 | 66 | 54 | 47 |
| 52 | 6 | 17 | 33 | 49 | 54 | 42 | 18 | 345 | 27 | 61 | 94 | 124 | 140 | 174 | 1 | 3 | 7 | 10 | 9 | 10 | 9 | 318 | 40 | 86 | 95 | 76 | 61 | 49 |
| 56 | 6 | 18 | 34 | 49 | 48 | 34 | 9 | 342 | 26 | 57 | 84 | 108 | 121 | 165 | 2 | 4 | 7 | 9 | 7 | 9 | 10 | 320 | 35 | 91 | 103 | 90 | 68 | 53 |
| 60 | 6 | 19 | 35 | 47 | 43 | 27 | 2 | 342 | 28 | 51 | 73 | 89 | 93 | 23 | 2 | 4 | 7 | 9 | 7 | 10 | 11 | 331 | 38 | 98 | 113 | 112 | 74 | 59 |
| 64 | 5 | 17 | 34 | 42 | 37 | 24 | 11 | 340 | 29 | 45 | 63 | 68 | 57 | 347 | 2 | 4 | 8 | 9 | 8 | 11 | 12 | 348 | 47 | 100 | 118 | 116 | 74 | 64 |
| 68 | 5 | 15 | 34 | 37 | 34 | 26 | 19 | 333 | 30 | 38 | 52 | 49 | 27 | 340 | 1 | 4 | 9 | 10 | 9 | 12 | 12 | 25 | 60 | 99 | 117 | 111 | 69 | 69 |
| 72 | 5 | 12 | 33 | 33 | 31 | 29 | 24 | 316 | 28 | 31 | 43 | 33 | 9 | 336 | 2 | 4 | 9 | 11 | 11 | 13 | 13 | 70 | 71 | 96 | 113 | 102 | 65 | 72 |
| 76 | 6 | 10 | 33 | 30 | 29 | 31 | 25 | 299 | 20 | 24 | 35 | 21 | 356 | 332 | 3 | 5 | 10 | 11 | 12 | 14 | 13 | 99 | 77 | 91 | 106 | 89 | 59 | 76 |
| 80 | 9 | 9 | 34 | 28 | 27 | 31 | 27 | 289 | 5 | 18 | 28 | 12 | 349 | 327 | 4 | 5 | 11 | 13 | 15 | 16 | 13 | 114 | 81 | 86 | 98 | 81 | 57 | 79 |

**APRIL**

| LAT | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 5 | 9 | 10 | 15 | 18 | 12 | 5 | 148 | 167 | 212 | 267 | 277 | 264 | 232 | 1 | 1 | 4 | 7 | 8 | 6 | 2 | 200 | 169 | 115 | 92 | 58 | 43 | 39 |
| 20 | 4 | 8 | 10 | 14 | 17 | 13 | 5 | 153 | 172 | 210 | 255 | 264 | 254 | 229 | 0 | 1 | 4 | 7 | 8 | 5 | 2 | 179 | 130 | 104 | 86 | 57 | 46 | 44 |
| 24 | 3 | 5 | 9 | 15 | 18 | 14 | 8 | 171 | 191 | 211 | 229 | 234 | 230 | 221 | 1 | 2 | 4 | 6 | 5 | 3 | 1 | 58 | 67 | 73 | 70 | 57 | 58 | 63 |
| 28 | 3 | 4 | 7 | 15 | 20 | 16 | 10 | 199 | 228 | 220 | 212 | 212 | 210 | 213 | 2 | 3 | 4 | 5 | 3 | 2 | 1 | 43 | 51 | 53 | 48 | 54 | 94 | 107 |
| 32 | 3 | 5 | 5 | 11 | 19 | 18 | 11 | 217 | 256 | 247 | 205 | 199 | 197 | 203 | 2 | 4 | 4 | 5 | 2 | 2 | 1 | 36 | 46 | 42 | 31 | 53 | 141 | 152 |
| 36 | 4 | 5 | 5 | 6 | 16 | 18 | 11 | 221 | 265 | 288 | 209 | 190 | 187 | 194 | 2 | 4 | 4 | 4 | 2 | 2 | 1 | 31 | 42 | 37 | 21 | 57 | 156 | 175 |
| 40 | 5 | 6 | 6 | 2 | 11 | 16 | 11 | 220 | 265 | 311 | 284 | 182 | 179 | 185 | 2 | 3 | 3 | 3 | 2 | 2 | 1 | 26 | 40 | 36 | 18 | 61 | 157 | 188 |
| 44 | 5 | 6 | 7 | 5 | 6 | 14 | 10 | 218 | 260 | 319 | 341 | 174 | 174 | 178 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 21 | 38 | 36 | 18 | 64 | 155 | 198 |
| 48 | 6 | 6 | 8 | 7 | 3 | 11 | 9 | 217 | 254 | 319 | 341 | 174 | 173 | 176 | 1 | 2 | 2 | 3 | 2 | 2 | 1 | 17 | 30 | 33 | 17 | 59 | 150 | 198 |
| 52 | 6 | 6 | 7 | 8 | 2 | 9 | 9 | 217 | 248 | 312 | 331 | 240 | 178 | 178 | 1 | 2 | 2 | 3 | 3 | 2 | 1 | 16 | 14 | 23 | 10 | 54 | 148 | 197 |
| 56 | 6 | 7 | 7 | 9 | 4 | 9 | 9 | 220 | 245 | 299 | 313 | 265 | 188 | 184 | 2 | 2 | 2 | 4 | 3 | 2 | 2 | 16 | 354 | 15 | 358 | 40 | 141 | 194 |
| 60 | 6 | 7 | 8 | 10 | 6 | 9 | 9 | 223 | 243 | 283 | 297 | 262 | 196 | 192 | 2 | 2 | 2 | 5 | 3 | 2 | 3 | 19 | 343 | 9 | 349 | 23 | 135 | 195 |
| 64 | 7 | 7 | 8 | 10 | 8 | 10 | 9 | 224 | 243 | 270 | 283 | 253 | 199 | 198 | 2 | 2 | 2 | 6 | 4 | 1 | 4 | 24 | 346 | 14 | 345 | 6 | 118 | 195 |
| 68 | 7 | 7 | 9 | 10 | 8 | 11 | 9 | 223 | 244 | 263 | 274 | 244 | 196 | 203 | 2 | 1 | 2 | 7 | 4 | 1 | 5 | 35 | 360 | 17 | 345 | 354 | 101 | 196 |
| 72 | 7 | 7 | 9 | 11 | 8 | 12 | 8 | 221 | 251 | 262 | 269 | 233 | 190 | 206 | 1 | 1 | 2 | 7 | 5 | 1 | 5 | 67 | 107 | 25 | 349 | 351 | 78 | 197 |
| 76 | 7 | 7 | 9 | 12 | 7 | 12 | 7 | 219 | 262 | 268 | 269 | 224 | 183 | 207 | 1 | 2 | 2 | 7 | 5 | 1 | 5 | 147 | 148 | 26 | 358 | 351 | 65 | 198 |
| 80 | 7 | 8 | 10 | 13 | 7 | 13 | 6 | 215 | 273 | 279 | 272 | 214 | 173 | 206 | 3 | 5 | 1 | 6 | 4 | 1 | 4 | 172 | 158 | 22 | 12 | 355 | 64 | 201 |

S HEMISPHERE    AMPLITUDE (0.1%) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF DENSITY/(ZONAL MEAN DENSITY) - 1

**APRIL**

| KM | WAVE 1 AMPLITUDE (0.1%) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1%) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
| 18 | 13 | 20 | 25 | 20 | 8 | 4 | 5 | 267 | 256 | 236 | 228 | 221 | 182 | 169 | 1 | 2 | 4 | 4 | 3 | 1 | 1 | 67 | 349 | 10 | 32 | 82 | 97 | 320 |
| 20 | 14 | 21 | 25 | 21 | 8 | 4 | 5 | 262 | 252 | 234 | 225 | 216 | 179 | 169 | 1 | 2 | 4 | 4 | 3 | 1 | 1 | 63 | 355 | 13 | 35 | 83 | 97 | 328 |
| 24 | 18 | 25 | 27 | 20 | 9 | 5 | 5 | 240 | 235 | 224 | 215 | 202 | 175 | 171 | 2 | 2 | 4 | 4 | 3 | 1 | 1 | 50 | 21 | 27 | 41 | 87 | 100 | 346 |
| 28 | 24 | 30 | 27 | 18 | 8 | 5 | 5 | 219 | 217 | 210 | 200 | 187 | 172 | 174 | 2 | 3 | 4 | 4 | 3 | 2 | 1 | 43 | 45 | 44 | 45 | 88 | 101 | 36 |
| 32 | 27 | 31 | 23 | 14 | 6 | 5 | 4 | 209 | 203 | 191 | 177 | 167 | 172 | 181 | 3 | 5 | 5 | 4 | 2 | 2 | 1 | 41 | 49 | 54 | 41 | 85 | 102 | 70 |
| 36 | 25 | 26 | 17 | 9 | 3 | 4 | 5 | 204 | 192 | 162 | 126 | 110 | 176 | 191 | 3 | 5 | 5 | 4 | 2 | 2 | 1 | 44 | 42 | 51 | 29 | 66 | 101 | 85 |
| 40 | 18 | 14 | 12 | 12 | 6 | 2 | 5 | 205 | 180 | 110 | 68 | 39 | 197 | 201 | 3 | 5 | 5 | 4 | 2 | 2 | 1 | 49 | 27 | 38 | 17 | 37 | 99 | 91 |
| 44 | 11 | 3 | 14 | 17 | 10 | 2 | 5 | 214 | 143 | 63 | 37 | 12 | 259 | 211 | 2 | 5 | 6 | 6 | 3 | 1 | 1 | 53 | 12 | 14 | 5 | 11 | 77 | 92 |
| 48 | 7 | 5 | 17 | 19 | 11 | 3 | 6 | 215 | 68 | 52 | 29 | 6 | 278 | 215 | 2 | 5 | 6 | 6 | 4 | 1 | 1 | 48 | 4 | 2 | 357 | 359 | 51 | 88 |
| 52 | 4 | 9 | 20 | 21 | 12 | 2 | 6 | 191 | 64 | 51 | 29 | 8 | 291 | 214 | 2 | 5 | 6 | 6 | 4 | 1 | 1 | 45 | 356 | 355 | 348 | 351 | 38 | 96 |
| 56 | 4 | 16 | 27 | 25 | 13 | 2 | 7 | 111 | 54 | 45 | 30 | 14 | 310 | 212 | 2 | 4 | 5 | 5 | 3 | 0 | 0 | 64 | 345 | 358 | 339 | 346 | 13 | 117 |
| 60 | 8 | 23 | 32 | 30 | 16 | 4 | 8 | 73 | 43 | 34 | 24 | 10 | 307 | 217 | 2 | 4 | 4 | 4 | 2 | 1 | 0 | 93 | 342 | 13 | 343 | 5 | 217 | 205 |
| 64 | 11 | 28 | 38 | 33 | 17 | 5 | 9 | 55 | 32 | 22 | 14 | 0 | 294 | 227 | 2 | 4 | 5 | 4 | 2 | 1 | 1 | 143 | 349 | 20 | 2 | 41 | 222 | 263 |
| 68 | 14 | 32 | 42 | 36 | 18 | 7 | 10 | 41 | 21 | 11 | 3 | 345 | 281 | 235 | 3 | 6 | 6 | 6 | 4 | 0 | 2 | 172 | 357 | 18 | 18 | 56 | 353 | 278 |
| 72 | 16 | 36 | 46 | 39 | 19 | 10 | 12 | 28 | 11 | 3 | 353 | 331 | 271 | 238 | 4 | 7 | 7 | 8 | 6 | 2 | 3 | 181 | 5 | 14 | 25 | 56 | 24 | 293 |
| 76 | 17 | 38 | 48 | 39 | 20 | 11 | 13 | 14 | 3 | 357 | 345 | 320 | 264 | 235 | 5 | 9 | 9 | 9 | 7 | 3 | 3 | 183 | 10 | 11 | 28 | 57 | 30 | 302 |
| 80 | 17 | 38 | 48 | 40 | 21 | 12 | 13 | 358 | 355 | 352 | 340 | 312 | 260 | 228 | 5 | 10 | 10 | 10 | 8 | 4 | 3 | 182 | 15 | 9 | 30 | 55 | 36 | 310 |

**MAY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18 | 4 | 11 | 15 | 11 | 6 | 4 | 5 | 210 | 254 | 252 | 260 | 263 | 175 | 120 | 7 | 9 | 6 | 2 | 2 | 3 | 2 | 144 | 152 | 174 | 194 | 140 | 94 | 74 |
| 20 | 5 | 12 | 15 | 10 | 5 | 5 | 5 | 211 | 244 | 245 | 253 | 254 | 172 | 125 | 7 | 9 | 6 | 2 | 2 | 4 | 2 | 144 | 152 | 171 | 182 | 128 | 91 | 70 |
| 24 | 16 | 20 | 17 | 9 | 4 | 5 | 5 | 201 | 204 | 205 | 213 | 206 | 160 | 139 | 6 | 10 | 7 | 2 | 2 | 3 | 2 | 146 | 149 | 156 | 134 | 95 | 78 | 64 |
| 28 | 28 | 36 | 30 | 15 | 6 | 5 | 4 | 191 | 178 | 170 | 167 | 151 | 150 | 157 | 4 | 8 | 6 | 4 | 3 | 3 | 2 | 150 | 143 | 133 | 94 | 62 | 58 | 54 |
| 32 | 30 | 46 | 48 | 25 | 10 | 4 | 2 | 182 | 165 | 154 | 145 | 127 | 135 | 193 | 2 | 4 | 5 | 5 | 4 | 2 | 1 | 160 | 135 | 102 | 66 | 36 | 25 | 47 |
| 36 | 28 | 47 | 56 | 33 | 11 | 2 | 3 | 171 | 155 | 143 | 131 | 107 | 64 | 291 | 2 | 1 | 3 | 5 | 4 | 2 | 0 | 179 | 103 | 38 | 27 | 7 | 340 | 29 |
| 40 | 24 | 41 | 50 | 32 | 11 | 5 | 6 | 155 | 144 | 135 | 120 | 84 | 2 | 317 | 2 | 2 | 4 | 6 | 5 | 3 | 1 | 190 | 316 | 332 | 338 | 331 | 302 | 250 |
| 44 | 22 | 35 | 41 | 26 | 10 | 7 | 8 | 143 | 134 | 127 | 109 | 58 | 347 | 324 | 2 | 3 | 6 | 7 | 6 | 4 | 1 | 197 | 314 | 315 | 308 | 289 | 272 | 226 |
| 48 | 21 | 30 | 35 | 23 | 11 | 9 | 10 | 136 | 126 | 117 | 96 | 43 | 346 | 330 | 2 | 3 | 6 | 8 | 7 | 5 | 2 | 207 | 316 | 310 | 294 | 269 | 257 | 221 |
| 52 | 21 | 29 | 33 | 24 | 13 | 12 | 12 | 130 | 119 | 108 | 84 | 35 | 352 | 337 | 2 | 3 | 5 | 8 | 8 | 6 | 2 | 213 | 320 | 311 | 284 | 258 | 247 | 223 |
| 56 | 22 | 30 | 33 | 25 | 16 | 15 | 13 | 119 | 105 | 94 | 71 | 29 | 359 | 344 | 3 | 3 | 5 | 7 | 8 | 7 | 3 | 213 | 319 | 314 | 281 | 254 | 241 | 232 |
| 60 | 25 | 32 | 34 | 25 | 18 | 17 | 13 | 109 | 93 | 80 | 55 | 16 | 358 | 345 | 3 | 3 | 5 | 7 | 8 | 8 | 4 | 208 | 314 | 315 | 286 | 253 | 238 | 228 |
| 64 | 28 | 35 | 33 | 25 | 18 | 15 | 11 | 101 | 82 | 66 | 37 | 4 | 354 | 340 | 4 | 3 | 6 | 8 | 8 | 8 | 5 | 202 | 307 | 313 | 291 | 247 | 230 | 218 |
| 68 | 30 | 37 | 33 | 26 | 17 | 10 | 8 | 96 | 74 | 54 | 21 | 351 | 342 | 328 | 4 | 3 | 8 | 8 | 8 | 7 | 6 | 195 | 300 | 314 | 295 | 238 | 218 | 201 |
| 72 | 31 | 38 | 33 | 26 | 17 | 6 | 6 | 93 | 69 | 44 | 7 | 339 | 313 | 307 | 4 | 3 | 9 | 9 | 8 | 7 | 7 | 189 | 296 | 315 | 297 | 230 | 207 | 189 |
| 76 | 30 | 36 | 31 | 25 | 15 | 5 | 4 | 93 | 66 | 37 | 358 | 327 | 272 | 283 | 3 | 3 | 10 | 10 | 8 | 6 | 7 | 185 | 295 | 317 | 298 | 225 | 202 | 184 |
| 80 | 25 | 31 | 27 | 23 | 14 | 6 | 3 | 94 | 65 | 31 | 349 | 314 | 247 | 254 | 3 | 3 | 11 | 10 | 8 | 6 | 7 | 184 | 299 | 321 | 299 | 225 | 208 | 184 |

**JUNE**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18 | 14 | 21 | 26 | 14 | 5 | 7 | 8 | 225 | 237 | 242 | 233 | 217 | 151 | 127 | 7 | 4 | 4 | 6 | 9 | 8 | 4 | 170 | 163 | 346 | 42 | 66 | 81 | 80 |
| 20 | 16 | 23 | 27 | 14 | 6 | 7 | 8 | 226 | 234 | 238 | 226 | 204 | 152 | 130 | 7 | 4 | 4 | 6 | 8 | 7 | 3 | 171 | 164 | 345 | 43 | 67 | 82 | 82 |
| 24 | 26 | 33 | 32 | 17 | 9 | 8 | 6 | 220 | 220 | 220 | 205 | 180 | 154 | 142 | 5 | 5 | 2 | 4 | 6 | 4 | 2 | 176 | 154 | 354 | 58 | 72 | 88 | 82 |
| 28 | 33 | 41 | 37 | 22 | 14 | 8 | 5 | 214 | 205 | 198 | 183 | 165 | 154 | 161 | 1 | 5 | 1 | 3 | 2 | 1 | 1 | 177 | 121 | 84 | 109 | 90 | 113 | 67 |
| 32 | 29 | 39 | 39 | 26 | 15 | 7 | 4 | 209 | 196 | 186 | 168 | 152 | 150 | 195 | 1 | 5 | 3 | 4 | 1 | 1 | 1 | 164 | 95 | 97 | 145 | 166 | 226 | 1 |
| 36 | 24 | 32 | 32 | 21 | 12 | 3 | 4 | 205 | 190 | 180 | 155 | 131 | 134 | 234 | 1 | 5 | 4 | 5 | 1 | 1 | 2 | 164 | 81 | 79 | 125 | 72 | 0 | 15 |
| 40 | 20 | 26 | 21 | 10 | 8 | 2 | 4 | 206 | 189 | 181 | 133 | 76 | 17 | 261 | 2 | 5 | 5 | 6 | 6 | 4 | 3 | 160 | 71 | 58 | 82 | 49 | 32 | 29 |
| 44 | 18 | 21 | 13 | 4 | 9 | 5 | 4 | 204 | 188 | 184 | 68 | 25 | 349 | 264 | 2 | 5 | 6 | 9 | 12 | 9 | 5 | 158 | 66 | 44 | 56 | 40 | 34 | 31 |
| 48 | 15 | 17 | 7 | 7 | 11 | 6 | 3 | 201 | 185 | 180 | 20 | 7 | 345 | 272 | 2 | 5 | 7 | 10 | 14 | 11 | 6 | 164 | 58 | 36 | 49 | 40 | 34 | 32 |
| 52 | 12 | 12 | 2 | 10 | 13 | 8 | 4 | 196 | 178 | 131 | 6 | 357 | 343 | 296 | 1 | 6 | 7 | 10 | 15 | 11 | 8 | 197 | 52 | 31 | 49 | 44 | 37 | 34 |
| 56 | 8 | 5 | 8 | 16 | 14 | 9 | 5 | 196 | 150 | 11 | 356 | 349 | 339 | 315 | 3 | 6 | 8 | 10 | 14 | 10 | 5 | 212 | 48 | 29 | 53 | 55 | 45 | 43 |
| 60 | 4 | 5 | 17 | 22 | 15 | 8 | 3 | 215 | 46 | 1 | 349 | 339 | 324 | 299 | 4 | 5 | 8 | 9 | 14 | 11 | 7 | 211 | 48 | 29 | 56 | 68 | 59 | 53 |
| 64 | 4 | 11 | 24 | 27 | 14 | 5 | 4 | 281 | 14 | 354 | 343 | 322 | 260 | 191 | 6 | 4 | 8 | 9 | 14 | 12 | 8 | 206 | 50 | 29 | 57 | 73 | 64 | 56 |
| 68 | 8 | 18 | 29 | 29 | 13 | 12 | 13 | 306 | 3 | 348 | 337 | 299 | 203 | 170 | 7 | 4 | 8 | 9 | 13 | 14 | 10 | 202 | 56 | 30 | 55 | 72 | 60 | 50 |
| 72 | 11 | 22 | 33 | 31 | 14 | 21 | 23 | 308 | 356 | 342 | 332 | 278 | 190 | 166 | 8 | 3 | 8 | 10 | 14 | 17 | 11 | 199 | 63 | 31 | 53 | 64 | 53 | 43 |
| 76 | 14 | 24 | 35 | 33 | 16 | 28 | 28 | 305 | 348 | 336 | 327 | 264 | 185 | 165 | 8 | 4 | 8 | 11 | 14 | 18 | 11 | 196 | 68 | 32 | 50 | 55 | 45 | 35 |
| 80 | 15 | 24 | 36 | 34 | 16 | 31 | 29 | 296 | 338 | 329 | 323 | 260 | 181 | 164 | 7 | 5 | 10 | 13 | 17 | 19 | 10 | 193 | 67 | 33 | 48 | 46 | 37 | 28 |

**JULY**

| KM | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18 | 11 | 16 | 33 | 20 | 11 | 2 | 4 | 347 | 276 | 260 | 249 | 289 | 319 | 119 | 10 | 10 | 5 | 4 | 5 | 7 | 6 | 174 | 196 | 239 | 38 | 119 | 98 | 124 |
| 20 | 10 | 22 | 37 | 23 | 10 | 1 | 4 | 328 | 261 | 252 | 238 | 271 | 259 | 131 | 10 | 10 | 7 | 4 | 6 | 6 | 6 | 166 | 200 | 241 | 32 | 118 | 102 | 118 |
| 24 | 23 | 46 | 51 | 32 | 13 | 6 | 4 | 236 | 227 | 225 | 207 | 208 | 184 | 159 | 4 | 10 | 12 | 2 | 1 | 5 | 4 | 155 | 213 | 243 | 347 | 81 | 62 | 123 |
| 28 | 27 | 50 | 59 | 47 | 22 | 11 | 5 | 220 | 208 | 199 | 183 | 176 | 173 | 177 | 5 | 4 | 20 | 4 | 1 | 3 | 2 | 85 | 223 | 238 | 278 | 284 | 28 | 118 |
| 32 | 18 | 37 | 51 | 53 | 29 | 12 | 4 | 212 | 192 | 178 | 161 | 155 | 160 | 193 | 6 | 2 | 19 | 10 | 6 | 4 | 1 | 81 | 226 | 228 | 239 | 257 | 331 | 170 |
| 36 | 9 | 24 | 37 | 49 | 28 | 8 | 1 | 200 | 166 | 148 | 130 | 121 | 125 | 257 | 3 | 3 | 24 | 20 | 13 | 4 | 2 | 82 | 192 | 217 | 221 | 242 | 285 | 200 |
| 40 | 3 | 17 | 29 | 46 | 31 | 11 | 4 | 95 | 118 | 107 | 93 | 75 | 49 | 341 | 5 | 4 | 25 | 24 | 18 | 5 | 3 | 93 | 157 | 207 | 209 | 217 | 236 | 191 |
| 44 | 8 | 22 | 34 | 50 | 40 | 19 | 8 | 65 | 84 | 75 | 66 | 45 | 23 | 351 | 3 | 7 | 24 | 26 | 20 | 6 | 4 | 98 | 164 | 195 | 199 | 211 | 207 | 184 |
| 48 | 12 | 28 | 42 | 55 | 45 | 25 | 10 | 68 | 70 | 59 | 53 | 33 | 15 | 355 | 4 | 7 | 23 | 23 | 20 | 8 | 5 | 96 | 148 | 192 | 188 | 195 | 183 | 168 |
| 52 | 14 | 32 | 48 | 60 | 50 | 28 | 11 | 73 | 64 | 52 | 45 | 25 | 10 | 353 | 4 | 6 | 19 | 20 | 17 | 8 | 4 | 87 | 152 | 184 | 177 | 184 | 157 | 163 |
| 56 | 17 | 38 | 57 | 68 | 55 | 31 | 13 | 72 | 59 | 45 | 38 | 19 | 2 | 346 | 5 | 4 | 21 | 19 | 17 | 9 | 5 | 86 | 147 | 195 | 177 | 174 | 158 | 150 |
| 60 | 21 | 42 | 63 | 73 | 60 | 33 | 14 | 68 | 55 | 39 | 33 | 12 | 353 | 337 | 4 | 4 | 20 | 20 | 16 | 7 | 5 | 85 | 169 | 195 | 184 | 182 | 160 | 155 |
| 64 | 27 | 47 | 66 | 73 | 56 | 31 | 12 | 61 | 50 | 34 | 27 | 5 | 343 | 328 | 3 | 4 | 26 | 24 | 17 | 8 | 6 | 90 | 178 | 207 | 196 | 192 | 177 | 152 |
| 68 | 31 | 50 | 66 | 68 | 50 | 27 | 9 | 55 | 45 | 30 | 22 | 357 | 331 | 312 | 2 | 7 | 26 | 28 | 20 | 9 | 7 | 102 | 190 | 207 | 205 | 204 | 188 | 165 |
| 72 | 36 | 52 | 64 | 63 | 44 | 22 | 6 | 50 | 41 | 26 | 19 | 350 | 317 | 277 | 1 | 9 | 33 | 35 | 25 | 10 | 9 | 143 | 192 | 213 | 210 | 213 | 196 | 171 |
| 76 | 38 | 51 | 62 | 59 | 39 | 18 | 6 | 46 | 39 | 25 | 17 | 345 | 305 | 245 | 2 | 11 | 34 | 39 | 28 | 12 | 10 | 157 | 192 | 210 | 211 | 210 | 198 | 174 |
| 80 | 38 | 49 | 56 | 55 | 36 | 16 | 6 | 42 | 37 | 25 | 20 | 346 | 300 | 237 | 3 | 14 | 39 | 43 | 30 | 11 | 10 | 225 | 192 | 209 | 209 | 214 | 199 | 184 |

118

S HEMISPHERE     AMPLITUDE (0.1%) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF DENSITY/(ZONAL MEAN DENSITY) - 1

## AUGUST

| KM LAT= | WAVE 1 AMPLITUDE (0.1%) -80 | -70 | -60 | -50 | -40 | -30 | -20 | WAVE 1 PHASE (DEGREES) -80 | -70 | -60 | -50 | -40 | -30 | -20 | WAVE 2 AMPLITUDE (0.1%) -80 | -70 | -60 | -50 | -40 | -30 | -20 | WAVE 2 PHASE (DEGREES) -80 | -70 | -60 | -50 | -40 | -30 | -20 DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 10 | 29 | 44 | 33 | 15 | 5 | 5 | 285 | 297 | 287 | 281 | 268 | 211 | 138 | 12 | 30 | 40 | 36 | 22 | 14 | 6 | 173 | 161 | 144 | 135 | 137 | 140 | 145 |
| 20 | 20 | 35 | 44 | 32 | 14 | 5 | 5 | 287 | 283 | 279 | 276 | 262 | 205 | 141 | 15 | 32 | 39 | 34 | 20 | 13 | 6 | 169 | 159 | 142 | 132 | 134 | 137 | 141 |
| 24 | 41 | 54 | 42 | 23 | 12 | 6 | 4 | 221 | 227 | 241 | 249 | 236 | 195 | 157 | 7 | 19 | 27 | 24 | 14 | 8 | 4 | 138 | 140 | 129 | 120 | 120 | 120 | 121 |
| 28 | 41 | 58 | 46 | 20 | 10 | 5 | 2 | 199 | 198 | 195 | 197 | 195 | 183 | 187 | 3 | 6 | 9 | 11 | 7 | 4 | 2 | 73 | 65 | 63 | 67 | 67 | 67 | 75 |
| 32 | 37 | 53 | 48 | 26 | 11 | 4 | 2 | 187 | 182 | 168 | 154 | 153 | 170 | 246 | 2 | 8 | 14 | 19 | 13 | 7 | 3 | 25 | 1 | 346 | 350 | 352 | 358 | 22 |
| 36 | 36 | 46 | 42 | 28 | 12 | 1 | 3 | 175 | 166 | 147 | 125 | 113 | 93 | 288 | 3 | 8 | 17 | 27 | 21 | 10 | 3 | 345 | 335 | 323 | 325 | 327 | 330 | 355 |
| 40 | 36 | 41 | 36 | 28 | 14 | 5 | 5 | 166 | 150 | 123 | 94 | 70 | 17 | 307 | 3 | 7 | 15 | 27 | 25 | 12 | 3 | 305 | 304 | 300 | 309 | 310 | 308 | 330 |
| 44 | 35 | 40 | 35 | 31 | 19 | 9 | 5 | 155 | 133 | 94 | 62 | 43 | 13 | 324 | 3 | 7 | 12 | 22 | 23 | 11 | 2 | 290 | 276 | 268 | 282 | 285 | 277 | 274 |
| 48 | 32 | 39 | 40 | 37 | 24 | 12 | 6 | 142 | 116 | 74 | 45 | 29 | 9 | 334 | 4 | 7 | 11 | 19 | 21 | 11 | 2 | 277 | 263 | 243 | 263 | 265 | 248 | 199 |
| 52 | 29 | 40 | 44 | 41 | 26 | 14 | 7 | 126 | 102 | 63 | 36 | 20 | 357 | 329 | 3 | 6 | 11 | 16 | 19 | 11 | 4 | 280 | 269 | 226 | 246 | 249 | 226 | 176 |
| 56 | 25 | 36 | 44 | 40 | 25 | 15 | 9 | 113 | 89 | 52 | 29 | 9 | 339 | 312 | 3 | 7 | 13 | 15 | 16 | 12 | 6 | 276 | 279 | 221 | 234 | 239 | 211 | 174 |
| 60 | 20 | 31 | 40 | 33 | 19 | 14 | 9 | 107 | 74 | 35 | 12 | 348 | 317 | 292 | 3 | 9 | 18 | 22 | 19 | 14 | 7 | 275 | 279 | 223 | 230 | 239 | 215 | 193 |
| 64 | 12 | 21 | 36 | 27 | 15 | 11 | 8 | 117 | 52 | 9 | 345 | 314 | 286 | 262 | 4 | 11 | 24 | 29 | 25 | 17 | 8 | 263 | 265 | 221 | 226 | 234 | 216 | 204 |
| 68 | 8 | 12 | 36 | 29 | 16 | 9 | 7 | 182 | 2 | 339 | 315 | 277 | 236 | 207 | 5 | 13 | 28 | 36 | 33 | 20 | 9 | 257 | 249 | 219 | 223 | 228 | 215 | 209 |
| 72 | 19 | 18 | 41 | 35 | 19 | 13 | 12 | 222 | 296 | 316 | 297 | 257 | 204 | 177 | 7 | 16 | 32 | 42 | 40 | 23 | 9 | 250 | 232 | 215 | 219 | 223 | 211 | 208 |
| 76 | 29 | 29 | 45 | 40 | 22 | 16 | 15 | 229 | 271 | 301 | 288 | 248 | 195 | 170 | 7 | 19 | 34 | 44 | 43 | 24 | 9 | 248 | 220 | 210 | 215 | 218 | 205 | 205 |
| 80 | 41 | 40 | 48 | 44 | 25 | 18 | 17 | 228 | 257 | 290 | 283 | 244 | 196 | 171 | 7 | 21 | 35 | 46 | 45 | 26 | 10 | 248 | 211 | 205 | 210 | 212 | 198 | 201 |

## SEPTEMBER

| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 36 | 72 | 96 | 72 | 37 | 16 | 7 | 298 | 255 | 235 | 228 | 224 | 215 | 181 | 5 | 16 | 22 | 12 | 5 | 2 | 1 | 230 | 295 | 312 | 314 | 351 | 14 | 18 |
| 20 | 45 | 79 | 94 | 69 | 35 | 15 | 7 | 275 | 246 | 231 | 225 | 220 | 209 | 177 | 7 | 15 | 21 | 12 | 5 | 2 | 1 | 228 | 294 | 315 | 316 | 352 | 15 | 14 |
| 24 | 35 | 71 | 79 | 57 | 29 | 13 | 6 | 212 | 211 | 211 | 209 | 202 | 186 | 167 | 1 | 9 | 17 | 10 | 5 | 2 | 1 | 250 | 329 | 327 | 321 | 355 | 15 | 23 |
| 28 | 27 | 60 | 66 | 45 | 25 | 12 | 5 | 158 | 170 | 173 | 176 | 171 | 157 | 156 | 2 | 9 | 14 | 9 | 4 | 2 | 2 | 358 | 352 | 338 | 325 | 352 | 15 | 27 |
| 32 | 31 | 57 | 69 | 50 | 27 | 12 | 4 | 120 | 139 | 139 | 136 | 136 | 136 | 160 | 3 | 8 | 10 | 7 | 3 | 1 | 2 | 360 | 358 | 338 | 317 | 340 | 18 | 36 |
| 36 | 39 | 60 | 72 | 56 | 28 | 10 | 3 | 98 | 116 | 118 | 113 | 112 | 122 | 190 | 3 | 7 | 8 | 6 | 3 | 1 | 2 | 359 | 356 | 329 | 301 | 319 | 29 | 44 |
| 40 | 47 | 64 | 71 | 55 | 25 | 4 | 5 | 85 | 98 | 103 | 97 | 92 | 109 | 223 | 2 | 6 | 7 | 5 | 2 | 1 | 3 | 354 | 354 | 321 | 292 | 303 | 59 | 51 |
| 44 | 58 | 70 | 61 | 43 | 17 | 3 | 8 | 77 | 85 | 91 | 85 | 69 | 274 | 233 | 2 | 7 | 9 | 6 | 3 | 1 | 3 | 343 | 349 | 317 | 298 | 309 | 75 | 62 |
| 48 | 64 | 72 | 54 | 33 | 12 | 9 | 10 | 74 | 79 | 85 | 76 | 39 | 274 | 235 | 2 | 7 | 11 | 7 | 4 | 1 | 3 | 319 | 346 | 318 | 309 | 321 | 73 | 74 |
| 52 | 66 | 69 | 47 | 27 | 11 | 12 | 12 | 71 | 75 | 80 | 68 | 12 | 275 | 238 | 2 | 9 | 13 | 9 | 5 | 1 | 3 | 311 | 338 | 316 | 315 | 336 | 59 | 76 |
| 56 | 63 | 63 | 40 | 23 | 13 | 15 | 13 | 66 | 69 | 72 | 56 | 355 | 281 | 243 | 3 | 10 | 14 | 9 | 5 | 1 | 2 | 318 | 329 | 310 | 319 | 353 | 53 | 59 |
| 60 | 65 | 63 | 38 | 26 | 21 | 17 | 15 | 57 | 52 | 42 | 23 | 344 | 289 | 247 | 3 | 11 | 15 | 8 | 4 | 2 | 2 | 340 | 327 | 304 | 311 | 8 | 60 | 19 |
| 64 | 64 | 66 | 43 | 32 | 26 | 18 | 14 | 45 | 34 | 13 | 357 | 336 | 290 | 245 | 3 | 11 | 15 | 7 | 2 | 2 | 1 | 353 | 325 | 299 | 300 | 10 | 65 | 14 |
| 68 | 62 | 71 | 52 | 40 | 29 | 19 | 15 | 33 | 19 | 354 | 341 | 328 | 282 | 238 | 2 | 11 | 16 | 8 | 1 | 3 | 1 | 355 | 322 | 296 | 280 | 12 | 67 | 82 |
| 72 | 58 | 73 | 59 | 45 | 30 | 19 | 15 | 21 | 8 | 343 | 332 | 321 | 273 | 230 | 1 | 11 | 16 | 9 | 1 | 3 | 3 | 333 | 316 | 292 | 279 | 262 | 69 | 100 |
| 76 | 55 | 73 | 61 | 47 | 31 | 20 | 15 | 11 | 0 | 336 | 326 | 315 | 265 | 225 | 1 | 10 | 16 | 11 | 2 | 3 | 4 | 272 | 310 | 290 | 277 | 248 | 70 | 110 |
| 80 | 51 | 70 | 62 | 49 | 33 | 22 | 16 | 3 | 354 | 331 | 322 | 310 | 260 | 224 | 2 | 10 | 17 | 12 | 3 | 3 | 4 | 213 | 303 | 288 | 275 | 247 | 72 | 105 |

## OCTOBER

| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 35 | 58 | 58 | 38 | 18 | 7 | 5 | 251 | 242 | 235 | 233 | 225 | 188 | 144 | 9 | 15 | 14 | 12 | 10 | 5 | 1 | 127 | 106 | 80 | 81 | 85 | 75 | 314 |
| 20 | 40 | 61 | 59 | 38 | 18 | 8 | 5 | 241 | 235 | 230 | 228 | 220 | 184 | 143 | 9 | 15 | 13 | 11 | 9 | 5 | 1 | 128 | 109 | 80 | 83 | 86 | 75 | 318 |
| 24 | 48 | 70 | 64 | 38 | 20 | 9 | 4 | 211 | 208 | 208 | 208 | 201 | 175 | 147 | 5 | 10 | 11 | 8 | 7 | 3 | 1 | 118 | 108 | 77 | 84 | 89 | 76 | 336 |
| 28 | 51 | 80 | 74 | 44 | 23 | 10 | 4 | 189 | 185 | 183 | 183 | 179 | 165 | 153 | 1 | 5 | 9 | 6 | 4 | 1 | 0 | 41 | 84 | 62 | 84 | 95 | 84 | 30 |
| 32 | 49 | 84 | 86 | 55 | 28 | 11 | 4 | 177 | 172 | 168 | 164 | 161 | 156 | 166 | 2 | 4 | 9 | 4 | 1 | 0 | 1 | 349 | 43 | 49 | 76 | 113 | 207 | 86 |
| 36 | 46 | 81 | 86 | 58 | 28 | 9 | 3 | 168 | 165 | 159 | 152 | 147 | 148 | 186 | 2 | 5 | 10 | 5 | 1 | 1 | 1 | 348 | 41 | 50 | 69 | 284 | 235 | 107 |
| 40 | 42 | 73 | 79 | 53 | 25 | 7 | 4 | 162 | 160 | 154 | 143 | 135 | 140 | 205 | 2 | 7 | 13 | 7 | 1 | 2 | 1 | 356 | 53 | 59 | 73 | 336 | 235 | 119 |
| 44 | 39 | 64 | 65 | 43 | 20 | 5 | 4 | 159 | 159 | 151 | 137 | 122 | 131 | 216 | 2 | 11 | 18 | 11 | 2 | 1 | 1 | 39 | 66 | 70 | 77 | 47 | 235 | 130 |
| 48 | 36 | 57 | 54 | 34 | 16 | 2 | 5 | 157 | 158 | 150 | 129 | 104 | 106 | 222 | 2 | 14 | 22 | 13 | 3 | 1 | 1 | 68 | 72 | 75 | 78 | 57 | 242 | 143 |
| 52 | 32 | 48 | 42 | 26 | 14 | 2 | 6 | 156 | 158 | 147 | 116 | 79 | 11 | 231 | 3 | 16 | 23 | 15 | 4 | 1 | 1 | 85 | 76 | 76 | 77 | 59 | 230 | 152 |
| 56 | 28 | 38 | 29 | 20 | 13 | 4 | 7 | 153 | 158 | 141 | 89 | 47 | 337 | 245 | 2 | 17 | 23 | 14 | 5 | 1 | 0 | 89 | 80 | 75 | 76 | 63 | 138 | 150 |
| 60 | 22 | 24 | 14 | 17 | 12 | 5 | 9 | 142 | 154 | 121 | 52 | 21 | 311 | 250 | 2 | 17 | 23 | 14 | 5 | 2 | 0 | 89 | 83 | 73 | 75 | 70 | 124 | 335 |
| 64 | 16 | 12 | 6 | 15 | 10 | 4 | 9 | 131 | 149 | 69 | 24 | 359 | 267 | 245 | 1 | 18 | 23 | 13 | 4 | 2 | 0 | 92 | 84 | 72 | 76 | 76 | 130 | 284 |
| 68 | 11 | 6 | 5 | 12 | 6 | 6 | 9 | 125 | 152 | 356 | 3 | 333 | 223 | 230 | 1 | 19 | 23 | 13 | 3 | 2 | 1 | 92 | 83 | 74 | 80 | 79 | 137 | 179 |
| 72 | 7 | 4 | 5 | 9 | 4 | 9 | 10 | 134 | 187 | 310 | 339 | 288 | 207 | 214 | 1 | 18 | 24 | 13 | 3 | 1 | 1 | 79 | 81 | 77 | 83 | 79 | 121 | 164 |
| 76 | 6 | 8 | 7 | 7 | 5 | 12 | 10 | 169 | 207 | 266 | 308 | 255 | 201 | 201 | 2 | 19 | 25 | 14 | 3 | 1 | 1 | 64 | 80 | 80 | 86 | 75 | 36 | 118 |
| 80 | 9 | 12 | 11 | 7 | 5 | 12 | 10 | 192 | 211 | 246 | 283 | 250 | 200 | 191 | 3 | 19 | 27 | 15 | 4 | 3 | 2 | 57 | 79 | 81 | 88 | 72 | 34 | 46 |

## NOVEMBER

| KM LAT= | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | -80 | -70 | -60 | -50 | -40 | -30 | -20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 19 | 36 | 39 | 30 | 12 | 6 | 6 | 272 | 263 | 250 | 238 | 210 | 128 | 98 | 3 | 6 | 4 | 3 | 5 | 3 | 2 | 202 | 205 | 222 | 193 | 116 | 81 | 303 |
| 20 | 17 | 32 | 36 | 29 | 12 | 5 | 6 | 261 | 256 | 243 | 233 | 204 | 128 | 100 | 3 | 6 | 4 | 3 | 4 | 2 | 1 | 203 | 206 | 220 | 194 | 118 | 83 | 300 |
| 24 | 15 | 24 | 28 | 22 | 10 | 5 | 4 | 210 | 215 | 210 | 203 | 179 | 133 | 115 | 2 | 5 | 3 | 2 | 3 | 2 | 0 | 211 | 212 | 221 | 201 | 131 | 101 | 288 |
| 28 | 21 | 30 | 30 | 23 | 11 | 4 | 3 | 174 | 168 | 163 | 160 | 152 | 141 | 144 | 2 | 4 | 3 | 2 | 2 | 1 | 1 | 228 | 225 | 219 | 210 | 167 | 135 | 140 |
| 32 | 24 | 36 | 37 | 27 | 11 | 3 | 3 | 162 | 150 | 139 | 134 | 134 | 154 | 174 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 241 | 236 | 208 | 206 | 197 | 168 | 133 |
| 36 | 21 | 32 | 35 | 25 | 9 | 3 | 4 | 157 | 141 | 127 | 121 | 127 | 170 | 186 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 243 | 228 | 185 | 192 | 202 | 180 | 133 |
| 40 | 14 | 22 | 25 | 18 | 6 | 3 | 4 | 152 | 132 | 116 | 112 | 126 | 184 | 189 | 2 | 1 | 3 | 4 | 4 | 2 | 2 | 236 | 188 | 160 | 178 | 197 | 182 | 133 |
| 44 | 5 | 8 | 12 | 9 | 2 | 3 | 4 | 142 | 109 | 94 | 98 | 151 | 190 | 183 | 2 | 2 | 4 | 4 | 4 | 2 | 2 | 223 | 142 | 138 | 164 | 185 | 177 | 130 |
| 48 | 5 | 9 | 8 | 3 | 2 | 3 | 3 | 342 | 346 | 10 | 13 | 228 | 192 | 173 | 2 | 3 | 5 | 5 | 3 | 2 | 2 | 210 | 128 | 127 | 155 | 168 | 167 | 124 |
| 52 | 10 | 18 | 15 | 7 | 4 | 3 | 2 | 333 | 330 | 336 | 320 | 250 | 196 | 168 | 2 | 4 | 6 | 5 | 4 | 2 | 2 | 209 | 126 | 125 | 151 | 158 | 159 | 123 |
| 56 | 13 | 23 | 19 | 10 | 5 | 3 | 2 | 330 | 326 | 330 | 313 | 260 | 200 | 185 | 3 | 4 | 6 | 6 | 5 | 2 | 2 | 212 | 129 | 130 | 153 | 163 | 159 | 130 |
| 60 | 14 | 24 | 21 | 12 | 6 | 3 | 2 | 327 | 325 | 328 | 308 | 270 | 200 | 219 | 3 | 4 | 6 | 7 | 6 | 3 | 2 | 214 | 135 | 137 | 156 | 174 | 169 | 157 |
| 64 | 16 | 27 | 24 | 13 | 6 | 3 | 2 | 325 | 323 | 325 | 302 | 269 | 187 | 246 | 4 | 4 | 7 | 8 | 8 | 3 | 3 | 216 | 144 | 139 | 156 | 179 | 174 | 159 |
| 68 | 17 | 29 | 24 | 14 | 5 | 4 | 1 | 320 | 319 | 320 | 293 | 257 | 172 | 280 | 4 | 4 | 8 | 8 | 7 | 4 | 3 | 216 | 147 | 134 | 151 | 176 | 172 | 148 |
| 72 | 18 | 28 | 23 | 13 | 4 | 5 | 1 | 315 | 315 | 315 | 284 | 227 | 162 | 12 | 4 | 5 | 9 | 9 | 6 | 4 | 3 | 216 | 144 | 126 | 144 | 166 | 163 | 131 |
| 76 | 19 | 29 | 22 | 12 | 5 | 5 | 2 | 313 | 312 | 309 | 275 | 206 | 160 | 45 | 4 | 5 | 10 | 9 | 6 | 4 | 4 | 215 | 136 | 118 | 137 | 147 | 147 | 121 |
| 80 | 19 | 30 | 22 | 12 | 5 | 4 | 2 | 309 | 309 | 304 | 267 | 195 | 164 | 58 | 5 | 7 | 12 | 9 | 6 | 4 | 4 | 213 | 125 | 113 | 133 | 125 | 128 | 117 |

N HEMISPHERE    AMPLITUDE (0.1%) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF DENSITY/(ZONAL MEAN DENSITY) - 1

## SEPTEMBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 7 | 9 | 7 | 7 | 3 | 4 | 3 | 140 | 154 | 209 | 245 | 173 | 125 | 75 | 4 | 3 | 1 | 7 | 10 | 8 | 3 | 173 | 185 | 334 | 47 | 51 | 49 | 25 |
| 20 | 6 | 8 | 7 | 7 | 3 | 3 | 2 | 142 | 156 | 208 | 244 | 183 | 129 | 75 | 3 | 3 | 1 | 7 | 10 | 8 | 3 | 173 | 184 | 337 | 45 | 49 | 47 | 25 |
| 24 | 5 | 7 | 6 | 6 | 4 | 2 | 0 | 153 | 164 | 205 | 238 | 219 | 188 | 66 | 2 | 2 | 1 | 6 | 9 | 7 | 3 | 171 | 186 | 345 | 34 | 39 | 39 | 23 |
| 28 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 174 | 181 | 200 | 225 | 237 | 248 | 257 | 1 | 0 | 2 | 5 | 7 | 6 | 2 | 163 | 204 | 354 | 14 | 19 | 23 | 19 |
| 32 | 4 | 5 | 6 | 6 | 7 | 7 | 4 | 199 | 205 | 197 | 206 | 238 | 253 | 256 | 1 | 2 | 2 | 4 | 6 | 5 | 2 | 3 | 358 | 1 | 344 | 348 | 357 | 14 |
| 36 | 4 | 5 | 6 | 6 | 7 | 8 | 6 | 215 | 222 | 197 | 191 | 228 | 247 | 256 | 2 | 3 | 3 | 3 | 5 | 4 | 1 | 358 | 358 | 5 | 318 | 313 | 320 | 1 |
| 40 | 4 | 6 | 5 | 6 | 7 | 8 | 5 | 220 | 229 | 200 | 182 | 208 | 230 | 255 | 3 | 4 | 3 | 2 | 4 | 4 | 0 | 356 | 357 | 9 | 298 | 280 | 282 | 303 |
| 44 | 4 | 6 | 5 | 6 | 8 | 7 | 3 | 217 | 230 | 206 | 178 | 182 | 198 | 244 | 3 | 5 | 3 | 1 | 4 | 4 | 1 | 352 | 355 | 13 | 268 | 247 | 255 | 210 |
| 48 | 4 | 6 | 5 | 6 | 8 | 7 | 1 | 208 | 228 | 211 | 174 | 162 | 167 | 200 | 3 | 5 | 4 | 0 | 3 | 4 | 1 | 350 | 354 | 17 | 152 | 220 | 232 | 186 |
| 52 | 4 | 5 | 5 | 5 | 8 | 7 | 1 | 198 | 222 | 212 | 164 | 145 | 146 | 134 | 3 | 4 | 3 | 1 | 4 | 4 | 1 | 356 | 355 | 19 | 102 | 201 | 214 | 178 |
| 56 | 4 | 5 | 3 | 5 | 9 | 7 | 1 | 194 | 213 | 204 | 145 | 131 | 131 | 67 | 2 | 5 | 4 | 2 | 4 | 5 | 2 | 13 | 358 | 17 | 86 | 184 | 199 | 182 |
| 60 | 5 | 5 | 1 | 4 | 9 | 6 | 2 | 207 | 213 | 201 | 146 | 132 | 124 | 348 | 2 | 5 | 4 | 4 | 5 | 5 | 2 | 16 | 1 | 15 | 92 | 171 | 196 | 215 |
| 64 | 6 | 6 | 1 | 4 | 7 | 4 | 4 | 225 | 227 | 242 | 170 | 143 | 122 | 332 | 3 | 5 | 4 | 5 | 5 | 5 | 3 | 1 | 2 | 17 | 96 | 161 | 197 | 237 |
| 68 | 7 | 8 | 4 | 5 | 6 | 3 | 4 | 238 | 240 | 249 | 204 | 164 | 128 | 326 | 4 | 5 | 5 | 6 | 5 | 5 | 3 | 342 | 0 | 24 | 101 | 151 | 200 | 250 |
| 72 | 9 | 10 | 6 | 6 | 5 | 2 | 4 | 243 | 246 | 250 | 222 | 185 | 146 | 330 | 5 | 5 | 5 | 6 | 5 | 4 | 4 | 334 | 3 | 30 | 103 | 142 | 205 | 256 |
| 76 | 9 | 12 | 8 | 6 | 5 | 3 | 4 | 240 | 247 | 251 | 232 | 192 | 152 | 348 | 5 | 5 | 6 | 7 | 4 | 2 | 3 | 335 | 11 | 35 | 104 | 130 | 212 | 260 |
| 80 | 10 | 13 | 8 | 4 | 4 | 4 | 4 | 231 | 245 | 255 | 244 | 181 | 149 | 20 | 5 | 5 | 6 | 7 | 4 | 1 | 1 | 345 | 24 | 41 | 102 | 117 | 16 | 282 |

## OCTOBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 9 | 13 | 8 | 12 | 16 | 19 | 15 | 143 | 151 | 204 | 323 | 355 | 4 | 355 | 4 | 3 | 3 | 8 | 10 | 8 | 5 | 216 | 249 | 21 | 59 | 41 | 12 | 356 |
| 20 | 9 | 12 | 8 | 13 | 17 | 20 | 15 | 143 | 154 | 209 | 314 | 342 | 354 | 348 | 3 | 3 | 3 | 8 | 11 | 9 | 5 | 217 | 254 | 18 | 53 | 37 | 13 | 358 |
| 24 | 7 | 10 | 10 | 16 | 22 | 23 | 18 | 149 | 164 | 217 | 287 | 309 | 323 | 327 | 1 | 1 | 3 | 8 | 12 | 11 | 5 | 220 | 280 | 5 | 30 | 24 | 11 | 2 |
| 28 | 5 | 8 | 11 | 19 | 28 | 28 | 19 | 159 | 181 | 219 | 259 | 276 | 287 | 298 | 0 | 1 | 4 | 10 | 15 | 14 | 6 | 354 | 346 | 354 | 3 | 6 | 5 | 4 |
| 32 | 3 | 5 | 9 | 20 | 32 | 32 | 19 | 185 | 206 | 207 | 225 | 241 | 252 | 262 | 2 | 3 | 5 | 12 | 17 | 15 | 6 | 21 | 14 | 343 | 344 | 351 | 359 | 2 |
| 36 | 3 | 3 | 7 | 24 | 38 | 42 | 25 | 235 | 249 | 165 | 178 | 194 | 202 | 203 | 3 | 3 | 5 | 14 | 19 | 16 | 7 | 20 | 19 | 336 | 332 | 341 | 352 | 354 |
| 40 | 4 | 3 | 11 | 36 | 59 | 69 | 43 | 267 | 309 | 116 | 146 | 160 | 167 | 167 | 3 | 3 | 5 | 13 | 19 | 17 | 8 | 17 | 17 | 329 | 322 | 331 | 338 | 339 |
| 44 | 5 | 6 | 16 | 48 | 83 | 92 | 57 | 283 | 346 | 94 | 128 | 142 | 151 | 153 | 3 | 3 | 4 | 11 | 18 | 18 | 8 | 7 | 11 | 322 | 311 | 317 | 319 | 322 |
| 48 | 6 | 8 | 21 | 55 | 93 | 101 | 61 | 292 | 359 | 84 | 118 | 134 | 143 | 146 | 2 | 2 | 3 | 9 | 16 | 17 | 7 | 356 | 7 | 319 | 303 | 306 | 304 | 308 |
| 52 | 7 | 9 | 24 | 62 | 100 | 107 | 62 | 295 | 2 | 79 | 112 | 128 | 135 | 138 | 2 | 2 | 3 | 8 | 14 | 15 | 7 | 354 | 11 | 316 | 298 | 296 | 292 | 297 |
| 56 | 8 | 10 | 27 | 69 | 109 | 116 | 65 | 294 | 358 | 76 | 107 | 123 | 128 | 131 | 1 | 2 | 3 | 7 | 12 | 15 | 8 | 19 | 12 | 319 | 294 | 284 | 272 | 294 |
| 60 | 11 | 13 | 31 | 74 | 110 | 113 | 63 | 296 | 358 | 73 | 102 | 118 | 123 | 126 | 1 | 2 | 3 | 6 | 11 | 15 | 8 | 31 | 341 | 319 | 284 | 267 | 257 | 295 |
| 64 | 12 | 15 | 33 | 74 | 106 | 103 | 60 | 301 | 360 | 67 | 97 | 114 | 120 | 123 | 2 | 3 | 4 | 5 | 9 | 14 | 8 | 4 | 319 | 323 | 284 | 255 | 253 | 301 |
| 68 | 13 | 17 | 35 | 69 | 98 | 90 | 57 | 309 | 3 | 58 | 91 | 110 | 120 | 122 | 4 | 4 | 4 | 4 | 8 | 12 | 8 | 343 | 315 | 330 | 296 | 249 | 258 | 307 |
| 72 | 13 | 19 | 35 | 63 | 89 | 77 | 55 | 315 | 4 | 50 | 85 | 108 | 121 | 123 | 5 | 4 | 4 | 4 | 6 | 11 | 8 | 335 | 319 | 336 | 322 | 254 | 271 | 311 |
| 76 | 12 | 18 | 33 | 57 | 79 | 65 | 51 | 315 | 0 | 43 | 80 | 106 | 125 | 124 | 5 | 4 | 5 | 5 | 5 | 11 | 6 | 331 | 325 | 339 | 336 | 273 | 286 | 314 |
| 80 | 10 | 15 | 30 | 51 | 73 | 56 | 46 | 308 | 351 | 38 | 78 | 106 | 130 | 127 | 3 | 3 | 5 | 6 | 5 | 12 | 3 | 333 | 339 | 337 | 334 | 298 | 298 | 317 |

## NOVEMBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 14 | 19 | 14 | 26 | 27 | 25 | 13 | 130 | 168 | 254 | 314 | 330 | 356 | 6 | 5 | 3 | 9 | 15 | 15 | 10 | 6 | 238 | 296 | 40 | 60 | 49 | 22 | 5 |
| 20 | 14 | 19 | 15 | 27 | 29 | 25 | 13 | 134 | 171 | 251 | 309 | 324 | 347 | 354 | 4 | 3 | 9 | 15 | 16 | 11 | 6 | 242 | 306 | 36 | 54 | 45 | 22 | 7 |
| 24 | 11 | 16 | 16 | 26 | 34 | 30 | 18 | 147 | 179 | 237 | 286 | 294 | 301 | 298 | 2 | 4 | 9 | 14 | 19 | 15 | 7 | 271 | 326 | 15 | 31 | 27 | 17 | 11 |
| 28 | 7 | 12 | 16 | 29 | 48 | 56 | 40 | 163 | 182 | 210 | 243 | 254 | 255 | 254 | 2 | 4 | 9 | 16 | 22 | 18 | 7 | 346 | 339 | 346 | 360 | 8 | 11 | 22 |
| 32 | 3 | 6 | 19 | 45 | 77 | 89 | 63 | 182 | 163 | 171 | 206 | 224 | 232 | 235 | 2 | 4 | 9 | 19 | 25 | 20 | 7 | 25 | 344 | 319 | 337 | 355 | 13 | 38 |
| 36 | 2 | 7 | 27 | 66 | 107 | 118 | 78 | 352 | 77 | 142 | 184 | 203 | 214 | 219 | 2 | 2 | 9 | 19 | 26 | 22 | 9 | 46 | 346 | 295 | 321 | 349 | 15 | 40 |
| 40 | 7 | 14 | 35 | 79 | 126 | 132 | 84 | 5 | 57 | 125 | 170 | 190 | 198 | 202 | 2 | 0 | 7 | 17 | 25 | 24 | 11 | 70 | 30 | 268 | 306 | 344 | 9 | 28 |
| 44 | 11 | 20 | 37 | 80 | 131 | 132 | 83 | 11 | 53 | 116 | 162 | 181 | 188 | 191 | 2 | 1 | 5 | 12 | 21 | 22 | 10 | 98 | 148 | 233 | 286 | 334 | 358 | 15 |
| 48 | 14 | 23 | 36 | 78 | 129 | 130 | 80 | 12 | 49 | 111 | 158 | 176 | 182 | 185 | 2 | 3 | 4 | 8 | 16 | 18 | 9 | 109 | 130 | 192 | 266 | 327 | 351 | 11 |
| 52 | 18 | 26 | 35 | 76 | 130 | 130 | 78 | 10 | 41 | 103 | 155 | 171 | 178 | 181 | 3 | 4 | 5 | 5 | 11 | 14 | 9 | 97 | 111 | 147 | 225 | 323 | 348 | 13 |
| 56 | 22 | 29 | 35 | 80 | 138 | 135 | 75 | 7 | 32 | 92 | 149 | 164 | 171 | 174 | 4 | 7 | 8 | 4 | 9 | 14 | 9 | 82 | 92 | 120 | 154 | 325 | 344 | 9 |
| 60 | 23 | 30 | 39 | 83 | 140 | 132 | 70 | 7 | 30 | 82 | 139 | 156 | 163 | 167 | 3 | 7 | 8 | 6 | 9 | 13 | 8 | 75 | 78 | 110 | 148 | 308 | 333 | 3 |
| 64 | 20 | 26 | 38 | 83 | 134 | 125 | 64 | 8 | 27 | 77 | 131 | 148 | 156 | 160 | 1 | 6 | 7 | 6 | 9 | 14 | 7 | 50 | 53 | 96 | 153 | 295 | 324 | 350 |
| 68 | 15 | 20 | 33 | 77 | 122 | 115 | 59 | 8 | 25 | 75 | 125 | 142 | 150 | 154 | 2 | 7 | 6 | 5 | 9 | 15 | 6 | 306 | 21 | 72 | 166 | 287 | 322 | 337 |
| 72 | 10 | 15 | 27 | 69 | 108 | 103 | 52 | 5 | 18 | 73 | 120 | 135 | 144 | 149 | 3 | 8 | 6 | 3 | 8 | 16 | 6 | 292 | 6 | 44 | 192 | 288 | 323 | 324 |
| 76 | 6 | 12 | 21 | 59 | 93 | 91 | 47 | 352 | 5 | 68 | 116 | 130 | 139 | 145 | 3 | 9 | 7 | 2 | 8 | 16 | 7 | 295 | 4 | 30 | 249 | 297 | 327 | 317 |
| 80 | 6 | 12 | 18 | 49 | 79 | 77 | 40 | 329 | 352 | 57 | 113 | 127 | 136 | 142 | 1 | 9 | 8 | 2 | 8 | 16 | 7 | 337 | 11 | 28 | 316 | 307 | 333 | 316 |

## DECEMBER

| KM LAT= | WAVE 1 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 1 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 AMPLITUDE (0.1%) 20 | 30 | 40 | 50 | 60 | 70 | 80 | WAVE 2 PHASE (DEGREES) 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 18 | 16 | 27 | 52 | 54 | 38 | 18 | 144 | 191 | 310 | 347 | 10 | 34 | 67 | 5 | 10 | 12 | 13 | 15 | 9 | 7 | 270 | 291 | 340 | 35 | 48 | 19 | 339 |
| 20 | 18 | 18 | 26 | 49 | 49 | 32 | 14 | 146 | 192 | 300 | 339 | 1 | 23 | 56 | 4 | 9 | 11 | 13 | 17 | 11 | 7 | 274 | 293 | 342 | 33 | 45 | 25 | 351 |
| 24 | 13 | 18 | 23 | 36 | 36 | 24 | 12 | 151 | 192 | 260 | 298 | 304 | 296 | 279 | 2 | 5 | 7 | 12 | 20 | 18 | 8 | 303 | 315 | 359 | 33 | 35 | 35 | 32 |
| 28 | 6 | 14 | 29 | 48 | 68 | 71 | 45 | 153 | 184 | 215 | 236 | 238 | 238 | 238 | 2 | 3 | 6 | 14 | 26 | 26 | 12 | 12 | 25 | 42 | 37 | 34 | 44 | 56 |
| 32 | 1 | 9 | 37 | 77 | 115 | 116 | 68 | 65 | 154 | 182 | 204 | 214 | 218 | 221 | 3 | 4 | 8 | 20 | 35 | 36 | 14 | 31 | 49 | 46 | 35 | 36 | 47 | 54 |
| 36 | 6 | 11 | 42 | 99 | 145 | 135 | 76 | 6 | 88 | 152 | 181 | 197 | 202 | 206 | 3 | 4 | 10 | 29 | 47 | 41 | 13 | 24 | 33 | 21 | 24 | 32 | 40 | 36 |
| 40 | 9 | 18 | 46 | 105 | 145 | 134 | 77 | 8 | 60 | 125 | 161 | 181 | 186 | 190 | 2 | 4 | 15 | 35 | 51 | 38 | 13 | 0 | 351 | 355 | 11 | 23 | 25 | 6 |
| 44 | 11 | 23 | 48 | 98 | 133 | 125 | 77 | 11 | 48 | 100 | 143 | 166 | 173 | 179 | 3 | 8 | 21 | 37 | 46 | 32 | 13 | 321 | 317 | 339 | 2 | 15 | 9 | 343 |
| 48 | 12 | 26 | 49 | 91 | 119 | 116 | 74 | 13 | 41 | 84 | 129 | 155 | 164 | 172 | 4 | 11 | 25 | 36 | 39 | 27 | 13 | 301 | 306 | 332 | 355 | 8 | 358 | 334 |
| 52 | 12 | 28 | 50 | 84 | 109 | 107 | 71 | 10 | 33 | 73 | 118 | 146 | 157 | 167 | 5 | 13 | 28 | 35 | 34 | 23 | 12 | 296 | 302 | 328 | 349 | 4 | 353 | 334 |
| 56 | 13 | 30 | 50 | 84 | 108 | 107 | 69 | 4 | 21 | 61 | 108 | 136 | 148 | 162 | 5 | 14 | 30 | 35 | 31 | 22 | 13 | 301 | 302 | 327 | 345 | 0 | 349 | 338 |
| 60 | 13 | 33 | 52 | 83 | 107 | 106 | 68 | 356 | 11 | 51 | 99 | 128 | 141 | 157 | 5 | 14 | 30 | 32 | 27 | 21 | 14 | 309 | 306 | 331 | 344 | 357 | 348 | 343 |
| 64 | 12 | 32 | 50 | 76 | 100 | 102 | 67 | 346 | 359 | 38 | 90 | 120 | 136 | 152 | 5 | 14 | 30 | 30 | 23 | 20 | 15 | 313 | 308 | 333 | 347 | 357 | 349 | 346 |
| 68 | 11 | 30 | 48 | 65 | 88 | 95 | 63 | 333 | 346 | 26 | 82 | 114 | 132 | 149 | 5 | 15 | 30 | 28 | 22 | 20 | 16 | 313 | 310 | 333 | 351 | 2 | 354 | 350 |
| 72 | 11 | 30 | 48 | 54 | 75 | 85 | 58 | 319 | 333 | 16 | 74 | 110 | 130 | 147 | 6 | 16 | 31 | 28 | 22 | 20 | 16 | 313 | 313 | 333 | 356 | 9 | 2 | 353 |
| 76 | 11 | 31 | 47 | 44 | 61 | 74 | 54 | 308 | 326 | 9 | 66 | 107 | 130 | 146 | 6 | 16 | 32 | 29 | 24 | 21 | 17 | 314 | 319 | 333 | 1 | 16 | 8 | 355 |
| 80 | 11 | 33 | 48 | 36 | 48 | 62 | 47 | 302 | 322 | 6 | 60 | 108 | 133 | 147 | 6 | 16 | 34 | 32 | 27 | 22 | 15 | 318 | 326 | 334 | 6 | 22 | 11 | 356 |

N HEMISPHERE     AMPLITUDE (0.1%) AND PHASE (DEGREES LONGITUDE E) OF WAVES 1 AND 2 OF DENSITY/(ZONAL MEAN DENSITY) - 1

| | WAVE 1 AMPLITUDE (0.1%) | | | | | | | WAVE 1 PHASE (DEGREES) | | | | | | | WAVE 2 AMPLITUDE (0.1%) | | | | | | | WAVE 2 PHASE (DEGREES) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KM LAT= | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 20 | 30 | 40 | 50 | 60 | 70 | 80DEG |
| **JANUARY** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 11 | 10 | 22 | 33 | 46 | 59 | 40 | 164 | 217 | 316 | 346 | 3 | 11 | 19 | 5 | 7 | 2 | 19 | 29 | 15 | 5 | 275 | 265 | 56 | 72 | 68 | 68 | 44 |
| 20 | 11 | 11 | 19 | 27 | 37 | 49 | 34 | 164 | 212 | 306 | 339 | 358 | 7 | 14 | 4 | 6 | 3 | 19 | 30 | 18 | 7 | 275 | 267 | 50 | 66 | 61 | 55 | 39 |
| 24 | 9 | 13 | 15 | 15 | 13 | 11 | 7 | 165 | 197 | 249 | 261 | 249 | 259 | 261 | 2 | 3 | 5 | 21 | 37 | 31 | 14 | 294 | 293 | 28 | 42 | 38 | 30 | 30 |
| 28 | 6 | 13 | 25 | 42 | 68 | 77 | 53 | 165 | 185 | 201 | 202 | 195 | 195 | 198 | 1 | 4 | 10 | 27 | 50 | 47 | 20 | 2 | 2 | 12 | 19 | 19 | 20 | 26 |
| 32 | 2 | 11 | 35 | 72 | 117 | 132 | 86 | 158 | 170 | 183 | 187 | 186 | 188 | 190 | 2 | 7 | 16 | 38 | 63 | 59 | 23 | 25 | 12 | 360 | 4 | 8 | 13 | 21 |
| 36 | 2 | 7 | 36 | 88 | 148 | 162 | 102 | 7 | 137 | 167 | 177 | 179 | 182 | 184 | 3 | 9 | 22 | 47 | 70 | 63 | 23 | 14 | 359 | 350 | 354 | 1 | 8 | 15 |
| 40 | 4 | 7 | 29 | 87 | 156 | 169 | 106 | 359 | 67 | 144 | 166 | 172 | 176 | 178 | 3 | 11 | 26 | 50 | 69 | 58 | 21 | 351 | 342 | 341 | 346 | 354 | 1 | 6 |
| 44 | 6 | 13 | 24 | 74 | 145 | 163 | 108 | 357 | 35 | 99 | 149 | 163 | 168 | 170 | 4 | 12 | 28 | 45 | 57 | 48 | 18 | 322 | 325 | 332 | 339 | 347 | 352 | 350 |
| 48 | 7 | 18 | 29 | 63 | 128 | 150 | 105 | 356 | 25 | 66 | 130 | 154 | 159 | 161 | 4 | 13 | 27 | 39 | 46 | 40 | 16 | 305 | 313 | 325 | 333 | 342 | 344 | 346 |
| 52 | 7 | 22 | 36 | 59 | 112 | 134 | 98 | 354 | 20 | 50 | 111 | 143 | 151 | 154 | 5 | 13 | 26 | 35 | 39 | 33 | 16 | 294 | 302 | 316 | 327 | 337 | 338 | 357 |
| 56 | 7 | 25 | 44 | 61 | 103 | 120 | 89 | 352 | 18 | 43 | 94 | 133 | 143 | 150 | 5 | 14 | 26 | 36 | 36 | 27 | 16 | 282 | 290 | 306 | 320 | 329 | 335 | 11 |
| 60 | 8 | 26 | 47 | 60 | 92 | 103 | 78 | 351 | 16 | 41 | 83 | 124 | 138 | 146 | 5 | 16 | 27 | 37 | 34 | 22 | 16 | 271 | 281 | 304 | 311 | 316 | 333 | 17 |
| 64 | 8 | 24 | 44 | 54 | 76 | 84 | 65 | 350 | 14 | 39 | 74 | 117 | 135 | 145 | 6 | 16 | 24 | 35 | 31 | 17 | 14 | 256 | 271 | 303 | 302 | 302 | 333 | 15 |
| 68 | 8 | 21 | 39 | 44 | 58 | 64 | 52 | 349 | 11 | 38 | 68 | 115 | 135 | 145 | 6 | 15 | 21 | 31 | 28 | 14 | 11 | 243 | 261 | 304 | 294 | 292 | 338 | 6 |
| 72 | 8 | 19 | 36 | 34 | 41 | 48 | 41 | 346 | 5 | 35 | 65 | 119 | 143 | 149 | 6 | 13 | 19 | 27 | 25 | 12 | 9 | 229 | 254 | 307 | 289 | 282 | 339 | 345 |
| 76 | 8 | 17 | 32 | 24 | 31 | 39 | 34 | 344 | 359 | 32 | 66 | 135 | 159 | 158 | 6 | 11 | 17 | 23 | 22 | 12 | 8 | 220 | 251 | 310 | 287 | 278 | 342 | 323 |
| 80 | 8 | 18 | 33 | 16 | 30 | 39 | 33 | 341 | 354 | 27 | 75 | 159 | 175 | 168 | 5 | 10 | 18 | 21 | 20 | 11 | 8 | 218 | 255 | 312 | 288 | 275 | 338 | 306 |
| **FEBRUARY** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 11 | 7 | 15 | 25 | 23 | 32 | 21 | 161 | 201 | 309 | 337 | 11 | 34 | 31 | 9 | 5 | 8 | 20 | 13 | 19 | 20 | 357 | 292 | 34 | 43 | 79 | 44 | 336 |
| 20 | 11 | 7 | 15 | 23 | 19 | 24 | 17 | 163 | 200 | 302 | 328 | 353 | 25 | 24 | 14 | 7 | 15 | 25 | 15 | 19 | 23 | 28 | 320 | 354 | 36 | 70 | 39 | 333 |
| 24 | 8 | 8 | 14 | 22 | 22 | 18 | 12 | 161 | 198 | 266 | 281 | 266 | 250 | 251 | 6 | 7 | 5 | 16 | 39 | 27 | 13 | 262 | 127 | 133 | 37 | 38 | 19 | 35 |
| 28 | 5 | 9 | 17 | 33 | 55 | 65 | 46 | 159 | 191 | 225 | 238 | 233 | 223 | 220 | 7 | 5 | 12 | 23 | 50 | 39 | 12 | 131 | 346 | 3 | 22 | 24 | 18 | 54 |
| 32 | 2 | 8 | 22 | 51 | 88 | 98 | 67 | 149 | 182 | 198 | 212 | 215 | 214 | 213 | 6 | 11 | 21 | 36 | 49 | 44 | 16 | 145 | 345 | 10 | 17 | 15 | 27 | 37 |
| 36 | 1 | 7 | 25 | 62 | 101 | 115 | 77 | 122 | 166 | 180 | 194 | 203 | 206 | 206 | 3 | 5 | 8 | 30 | 66 | 44 | 17 | 119 | 26 | 23 | 11 | 12 | 16 | 349 |
| 40 | 1 | 5 | 24 | 63 | 105 | 117 | 80 | 95 | 138 | 158 | 177 | 189 | 198 | 198 | 3 | 4 | 12 | 19 | 51 | 38 | 18 | 165 | 195 | 11 | 360 | 4 | 12 | 321 |
| 44 | 1 | 5 | 20 | 57 | 96 | 105 | 73 | 116 | 112 | 137 | 160 | 176 | 186 | 189 | 5 | 5 | 10 | 13 | 35 | 24 | 11 | 312 | 51 | 128 | 27 | 15 | 345 | 278 |
| 48 | 1 | 5 | 19 | 53 | 92 | 97 | 70 | 147 | 83 | 113 | 145 | 162 | 173 | 181 | 2 | 4 | 4 | 13 | 25 | 16 | 15 | 306 | 10 | 84 | 44 | 355 | 331 | 286 |
| 52 | 0 | 6 | 20 | 54 | 89 | 93 | 65 | 165 | 53 | 94 | 132 | 151 | 161 | 173 | 4 | 4 | 10 | 10 | 17 | 11 | 17 | 331 | 46 | 131 | 62 | 5 | 312 | 281 |
| 56 | 1 | 10 | 25 | 60 | 88 | 85 | 59 | 351 | 38 | 83 | 124 | 141 | 151 | 169 | 3 | 3 | 3 | 8 | 14 | 10 | 15 | 12 | 312 | 48 | 57 | 356 | 305 | 273 |
| 60 | 3 | 14 | 30 | 62 | 79 | 76 | 54 | 13 | 45 | 83 | 117 | 131 | 142 | 146 | 4 | 5 | 11 | 9 | 14 | 9 | 15 | 336 | 79 | 142 | 75 | 2 | 299 | 281 |
| 64 | 4 | 16 | 30 | 55 | 64 | 60 | 47 | 26 | 54 | 84 | 110 | 121 | 135 | 164 | 3 | 1 | 10 | 11 | 16 | 10 | 15 | 69 | 8 | 113 | 78 | 8 | 299 | 275 |
| 68 | 4 | 16 | 29 | 43 | 44 | 40 | 39 | 42 | 64 | 86 | 101 | 108 | 128 | 165 | 3 | 10 | 16 | 15 | 16 | 8 | 14 | 1 | 88 | 118 | 74 | 2 | 310 | 296 |
| 72 | 2 | 13 | 24 | 30 | 26 | 20 | 28 | 63 | 74 | 85 | 89 | 86 | 116 | 167 | 5 | 10 | 20 | 18 | 24 | 12 | 13 | 68 | 86 | 118 | 74 | 14 | 312 | 282 |
| 76 | 1 | 10 | 19 | 20 | 15 | 4 | 19 | 98 | 79 | 83 | 73 | 42 | 44 | 177 | 5 | 9 | 17 | 20 | 21 | 11 | 14 | 66 | 82 | 92 | 63 | 1 | 336 | 311 |
| 80 | 1 | 6 | 13 | 12 | 17 | 14 | 11 | 185 | 78 | 73 | 45 | 346 | 314 | 203 | 5 | 16 | 23 | 22 | 30 | 15 | 13 | 34 | 86 | 115 | 62 | 13 | 319 | 287 |
| **MARCH** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 10 | 9 | 12 | 30 | 31 | 24 | 11 | 149 | 172 | 334 | 5 | 11 | 7 | 347 | 3 | 0 | 11 | 27 | 37 | 33 | 15 | 284 | 202 | 81 | 67 | 47 | 38 | 28 |
| 20 | 10 | 9 | 10 | 25 | 25 | 17 | 8 | 151 | 178 | 318 | 355 | 359 | 348 | 303 | 3 | 0 | 10 | 26 | 37 | 33 | 14 | 288 | 228 | 78 | 64 | 43 | 35 | 26 |
| 24 | 8 | 11 | 12 | 19 | 25 | 32 | 27 | 159 | 190 | 254 | 284 | 266 | 241 | 226 | 1 | 1 | 7 | 21 | 33 | 30 | 13 | 313 | 16 | 57 | 47 | 31 | 23 | 17 |
| 28 | 5 | 11 | 21 | 42 | 69 | 79 | 57 | 171 | 196 | 221 | 233 | 231 | 224 | 217 | 1 | 2 | 6 | 16 | 28 | 26 | 11 | 34 | 22 | 20 | 18 | 13 | 11 | 9 |
| 32 | 2 | 8 | 26 | 65 | 107 | 116 | 78 | 193 | 196 | 203 | 216 | 220 | 218 | 214 | 2 | 3 | 8 | 16 | 25 | 23 | 9 | 62 | 28 | 0 | 358 | 4 | 7 | 9 |
| 36 | 1 | 4 | 23 | 68 | 112 | 128 | 84 | 278 | 177 | 184 | 203 | 211 | 212 | 212 | 2 | 4 | 7 | 14 | 21 | 20 | 9 | 68 | 33 | 1 | 355 | 6 | 11 | 17 |
| 40 | 2 | 4 | 18 | 59 | 105 | 117 | 78 | 344 | 64 | 151 | 186 | 200 | 205 | 209 | 2 | 4 | 6 | 10 | 17 | 17 | 9 | 64 | 39 | 19 | 5 | 12 | 19 | 29 |
| 44 | 3 | 9 | 19 | 46 | 82 | 90 | 57 | 359 | 45 | 105 | 161 | 184 | 194 | 205 | 1 | 4 | 6 | 8 | 14 | 14 | 9 | 56 | 48 | 54 | 52 | 34 | 32 | 38 |
| 48 | 4 | 13 | 24 | 44 | 69 | 70 | 42 | 3 | 38 | 80 | 134 | 165 | 180 | 196 | 1 | 4 | 8 | 10 | 13 | 12 | 9 | 26 | 55 | 72 | 81 | 52 | 43 | 43 |
| 52 | 5 | 15 | 29 | 49 | 66 | 65 | 33 | 356 | 32 | 71 | 115 | 147 | 163 | 183 | 1 | 3 | 8 | 12 | 13 | 11 | 8 | 323 | 54 | 77 | 87 | 62 | 50 | 42 |
| 56 | 6 | 17 | 32 | 54 | 65 | 56 | 27 | 344 | 24 | 66 | 102 | 132 | 148 | 172 | 1 | 3 | 7 | 10 | 10 | 10 | 8 | 304 | 38 | 78 | 86 | 61 | 53 | 41 |
| 60 | 7 | 20 | 36 | 56 | 59 | 46 | 17 | 342 | 24 | 61 | 89 | 115 | 130 | 162 | 2 | 4 | 7 | 9 | 6 | 8 | 9 | 309 | 26 | 89 | 99 | 85 | 69 | 47 |
| 64 | 7 | 20 | 37 | 53 | 50 | 35 | 5 | 345 | 27 | 56 | 77 | 95 | 104 | 132 | 2 | 4 | 7 | 8 | 6 | 9 | 10 | 319 | 27 | 99 | 113 | 119 | 79 | 55 |
| 68 | 6 | 19 | 36 | 47 | 42 | 27 | 9 | 351 | 31 | 50 | 66 | 74 | 69 | 359 | 2 | 4 | 8 | 9 | 8 | 11 | 12 | 334 | 38 | 104 | 122 | 128 | 79 | 61 |
| 72 | 4 | 16 | 34 | 40 | 37 | 28 | 19 | 352 | 34 | 43 | 55 | 53 | 35 | 344 | 2 | 4 | 8 | 10 | 9 | 12 | 12 | 355 | 54 | 104 | 124 | 124 | 75 | 66 |
| 76 | 4 | 14 | 33 | 34 | 34 | 30 | 24 | 339 | 34 | 36 | 45 | 36 | 12 | 340 | 2 | 4 | 9 | 10 | 10 | 12 | 13 | 33 | 68 | 100 | 121 | 113 | 67 | 71 |
| 80 | 5 | 11 | 32 | 31 | 32 | 32 | 27 | 313 | 29 | 28 | 36 | 24 | 1 | 335 | 2 | 5 | 10 | 11 | 11 | 13 | 13 | 79 | 77 | 96 | 114 | 101 | 63 | 74 |
| **APRIL** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 7 | 13 | 10 | 20 | 23 | 14 | 2 | 141 | 159 | 216 | 296 | 304 | 291 | 255 | 2 | 3 | 6 | 9 | 11 | 8 | 3 | 212 | 198 | 139 | 104 | 60 | 39 | 31 |
| 20 | 6 | 12 | 10 | 19 | 23 | 14 | 3 | 141 | 160 | 213 | 290 | 300 | 287 | 254 | 2 | 3 | 6 | 9 | 11 | 7 | 3 | 211 | 195 | 135 | 102 | 59 | 39 | 32 |
| 24 | 5 | 9 | 11 | 16 | 20 | 14 | 4 | 146 | 165 | 207 | 263 | 278 | 271 | 243 | 1 | 1 | 5 | 8 | 9 | 6 | 3 | 192 | 169 | 115 | 94 | 59 | 41 | 38 |
| 28 | 3 | 6 | 11 | 18 | 20 | 14 | 7 | 158 | 180 | 203 | 228 | 241 | 243 | 233 | 1 | 1 | 4 | 6 | 4 | 4 | 2 | 81 | 77 | 80 | 76 | 56 | 49 | 55 |
| 32 | 2 | 4 | 10 | 20 | 24 | 18 | 10 | 191 | 218 | 208 | 208 | 213 | 217 | 221 | 2 | 3 | 5 | 6 | 3 | 2 | 1 | 48 | 53 | 53 | 49 | 53 | 84 | 94 |
| 36 | 3 | 5 | 6 | 16 | 25 | 21 | 12 | 219 | 257 | 227 | 199 | 199 | 200 | 209 | 2 | 4 | 5 | 5 | 2 | 2 | 1 | 40 | 46 | 41 | 30 | 48 | 145 | 144 |
| 40 | 3 | 6 | 5 | 10 | 21 | 21 | 13 | 227 | 271 | 273 | 198 | 190 | 188 | 198 | 2 | 4 | 5 | 5 | 1 | 3 | 1 | 33 | 43 | 36 | 19 | 51 | 158 | 167 |
| 44 | 4 | 6 | 6 | 2 | 14 | 19 | 12 | 223 | 272 | 310 | 215 | 180 | 179 | 186 | 2 | 4 | 3 | 3 | 1 | 3 | 1 | 27 | 43 | 37 | 17 | 48 | 161 | 189 |
| 48 | 5 | 5 | 8 | 5 | 8 | 15 | 10 | 217 | 267 | 325 | 1 | 162 | 171 | 177 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 23 | 48 | 44 | 25 | 73 | 156 | 201 |
| 52 | 5 | 5 | 8 | 8 | 4 | 12 | 9 | 213 | 259 | 331 | 1 | 134 | 166 | 169 | 1 | 3 | 2 | 2 | 2 | 2 | 1 | 17 | 49 | 45 | 43 | 78 | 155 | 206 |
| 56 | 6 | 6 | 8 | 9 | 1 | 9 | 8 | 214 | 250 | 327 | 348 | 98 | 168 | 168 | 1 | 2 | 2 | 2 | 3 | 2 | 0 | 9 | 30 | 33 | 45 | 76 | 152 | 178 |
| 60 | 6 | 7 | 8 | 10 | 3 | 8 | 9 | 219 | 246 | 312 | 325 | 286 | 184 | 178 | 2 | 3 | 2 | 3 | 3 | 2 | 1 | 10 | 350 | 9 | 10 | 61 | 148 | 195 |
| 64 | 6 | 7 | 8 | 10 | 7 | 9 | 10 | 224 | 242 | 290 | 303 | 272 | 199 | 189 | 3 | 3 | 2 | 5 | 3 | 2 | 2 | 14 | 339 | 5 | 349 | 36 | 140 | 193 |
| 68 | 6 | 7 | 8 | 10 | 9 | 10 | 10 | 226 | 238 | 270 | 287 | 260 | 205 | 198 | 3 | 3 | 3 | 6 | 4 | 2 | 4 | 19 | 340 | 8 | 341 | 12 | 130 | 194 |
| 72 | 7 | 7 | 9 | 10 | 9 | 11 | 10 | 225 | 236 | 257 | 273 | 248 | 203 | 203 | 3 | 3 | 3 | 8 | 5 | 1 | 5 | 25 | 352 | 19 | 339 | 355 | 107 | 195 |
| 76 | 7 | 6 | 9 | 10 | 9 | 12 | 9 | 223 | 241 | 253 | 266 | 237 | 197 | 206 | 2 | 1 | 3 | 8 | 5 | 1 | 6 | 37 | 21 | 25 | 342 | 340 | 79 | 196 |
| 80 | 7 | 6 | 9 | 11 | 8 | 12 | 8 | 220 | 252 | 258 | 265 | 227 | 189 | 208 | 1 | 1 | 2 | 7 | 5 | 1 | 6 | 88 | 121 | 27 | 349 | 346 | 65 | 197 |